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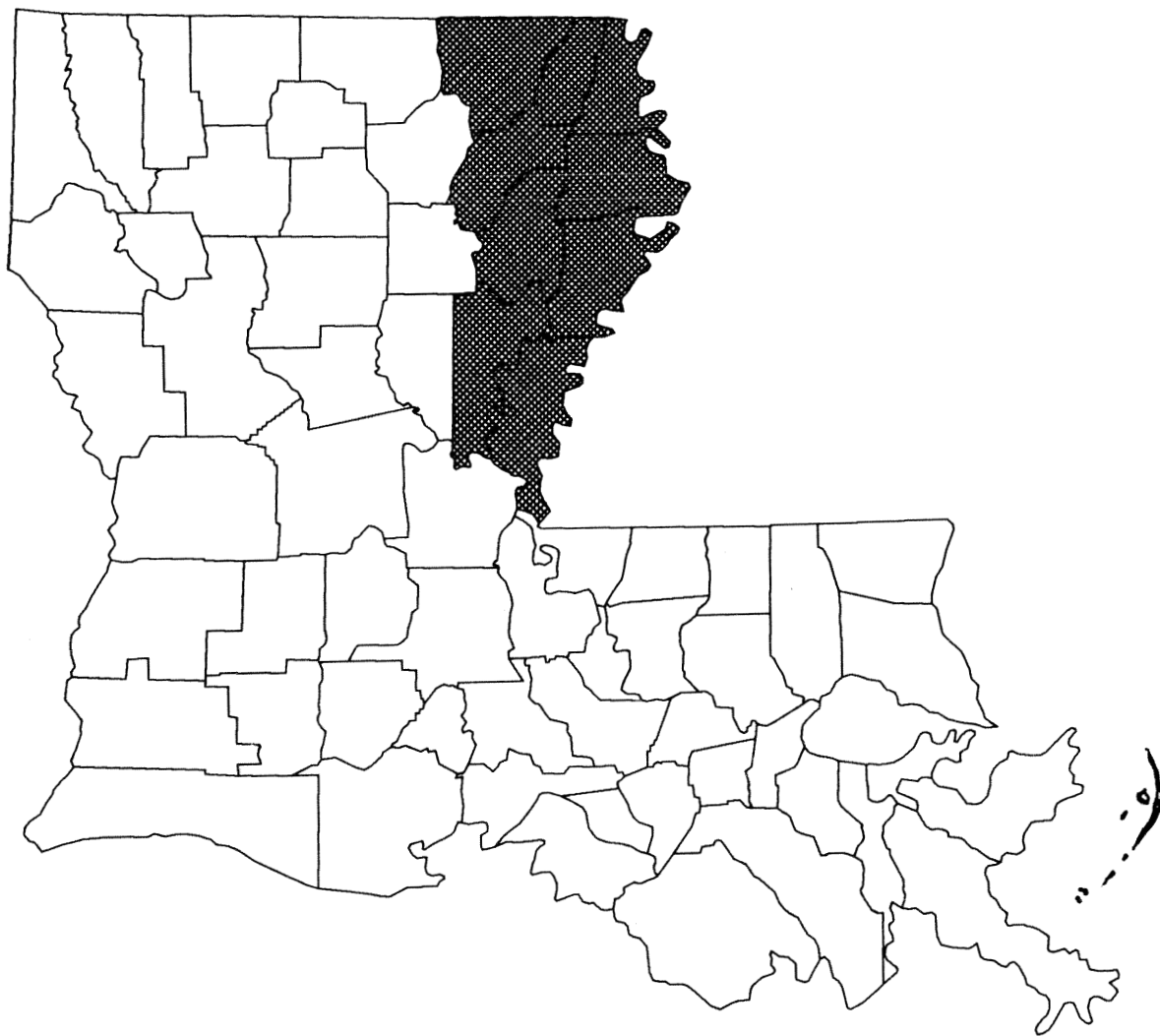
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Forest Statistics for North Delta Louisiana Parishes – 1991

James F. Rosson, Jr., Patrick E. Miller, and John S. Vissage



FOREWORD

The USDA-Forest Service, Southern Forest Experiment Station, Forest Inventory and Analysis unit (SO-FIA), conducts forest inventories covering the States of Alabama, Arkansas, Louisiana, Mississippi, east Oklahoma, Tennessee, and east Texas, and the island of Puerto Rico.

The SO-FIA forest inventories are part of a nationwide effort originally authorized by the McSweeney-McNary Act of 1928. More recent legislation pertinent to the SO-FIA mission includes the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978. The SO-FIA mission is to develop, analyze, and maintain forest resource information that is essential for formulation of forest policies and programs.

ACKNOWLEDGMENTS

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CONTENTS

INTRODUCTION.....	1
METHODS.....	1
STATISTICAL RELIABILITY	2
HIGHLIGHTS	2
APPENDIX	3
Definition of Terms	3
Core Tables (1-25) ¹	6
Supplemental Tables (26-43)	16
Figures (1-9)	26

¹Core tables are presented in response to the Southern Industrial Forestry Research Council's recommendations. These tables are identical among Forest Inventory and Analysis units in the eastern United States.

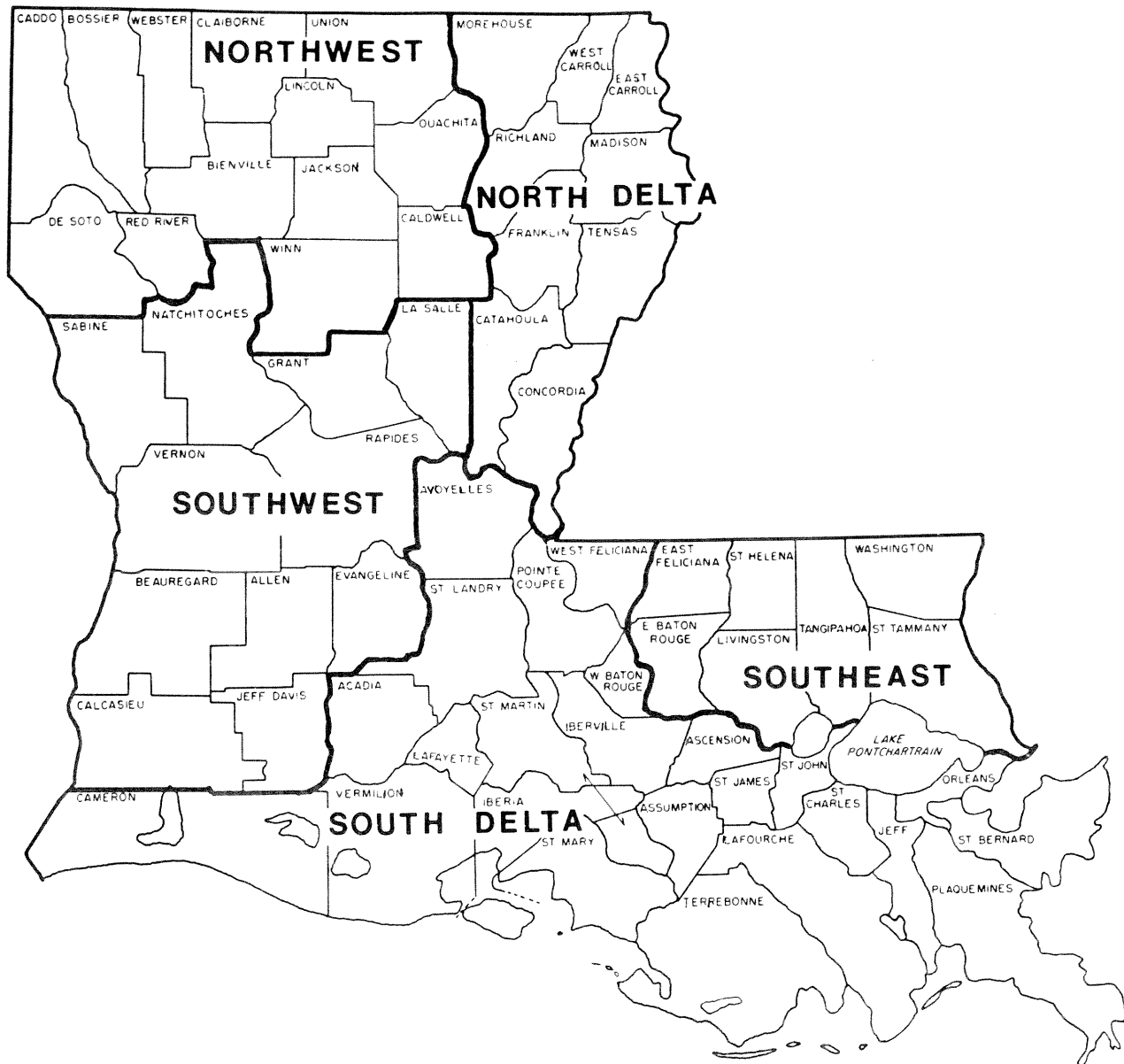


Figure I.—Forest survey units of Louisiana.

Forest Statistics for North Delta Louisiana Parishes — 1991

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INTRODUCTION

Tabulated results were derived from data obtained from a 1991 continuous forest inventory of North Delta Louisiana parishes (fig.I). Core tables (1 to 25) are compatible among Forest Inventory and Analysis units in the Eastern United States. Supplemental tables (26 to 43) provide information beyond that provided by the core tables. All comparisons between the 1991 and 1984 surveys are based upon reprocessed 1984 data.

METHODS

The estimates of timberland area, volume, growth, removals, and mortality for the North Delta Louisiana parishes are based upon the latest and most up-to-date inventory techniques available. There are important differences in the methods used between the 1984 and 1991 inventories. In many cases, improvements in methodology for deriving current estimates can raise concerns about trends between survey periods. Because these differences might appear to cloud the comparisons between 1984 and 1991 results, the major differences in procedures are documented below.

First, the 1984 inventory used 5 satellite points per plot, the 1991 inventory used 10 points. This should affect comparisons of the North Delta Louisiana unit totals very little, but caution should be used when analyzing smaller aggregations of data.

Second, the 1984 survey used regression equations to estimate volume. The coefficients were based upon deterministic tree measurements from a small number of sample plots. Volumes for the 1991 survey were derived from deterministic measurements made on all trees ≥ 5.0 inches diameter at breast height (d.b.h.) on all plots.

Third, the classification of trees into growing-stock, rough, or rotten classes has been modified in two ways to ensure compatibility among the eastern Forest Inventory and Analysis units. (1) Currently, any tree that contains or is capable of producing one 12-foot or two 8-foot logs anywhere in the sawlog portion of the tree is classified as growing stock. The 1984 survey classified growing-stock trees as those that had or were capable of producing a 12-foot log only in the butt 16-foot section. (2) The 1984 survey required that over one-half of the sawlog volume (or prospective volume) had to be utilizable. The current standard is that one-third of the sawlog volume in the sawlog

portion of the tree has to be utilizable in order for the tree to be classed as growing stock.

Using 5 or 10 satellite points per plot has little effect on volume totals for the unit because of the large sample size. Likewise, test runs comparing the results of volume equations and deterministic measurements have also demonstrated very little difference between methods. Here again, a large sample size enhances precision.

The first change in the growing-stock definition (log position) did affect direct comparisons between 1984 and 1991 estimates. To compensate for this definition change, the 1984 inventory data were reprocessed to be compatible with the 1991 growing-stock standard. The total number of trees affected by the definition change is small, and mostly hardwoods because of growth habit. It was not possible to classify all trees by the new growing-stock definition in the 1984 or 1991 data. Some trees died or were cut between measurement periods. Since these trees are gone, cruisers had no way of determining what the classification of these trees would be under the new standard. Therefore, the tree class previously assigned was maintained throughout the compilation process on mortality trees, on rough trees that were cut and not used, and on rotten trees that were cut. All rough trees that were cut and used were reclassified as growing stock.

The second growing-stock definition modification (changing from one-half to one-third sound) had virtually no impact. Only a small number of sawlog-sized sample trees had sound volume in the range of ≥ 33 percent but < 50 percent. Of these, most were reprocessed to resolve log position differences stated earlier. This left only a very few trees that were affected by this definition change, with subsequent little effect on growing-stock trends.

Users interested in trend analysis of growing-stock volume, growth, removals, and mortality between the 1984 and 1991 surveys should be aware of the impact of the growing-stock definition change. The incompatibility arises from trees that were cut or died, impacting growth, removals, and mortality estimates. The magnitude is, most likely, small but not possible to define with certainty.

Growing-stock comparisons between the 1984 reprocessed data and the 1991 data are valid for most general applications. However, in a more rigorous analysis it is important to make sure the changes are real and not due to definition changes. In such instances the comparisons between surveys should be done using all live trees. This procedure eliminates any uncertainties caused by the

Table I—Sampling errors¹ for timberland, live trees, growing stock, and sawtimber, North Delta Louisiana Parishes, 1991

Parish	Timberland	Live trees			Growing stock			Sawtimber volume
		Volume	Growth	Removals	Volume	Growth	Removals	
-----Percent-----								
Catahoula	1.9	13.3	22.2	(2)	14.4	22.9	(2)	16.4
Concordia	1.6	12.4	31.1	(2)	13.3	24.5	(2)	16.1
East Carroll	1.8	28.8	(2)	(2)	29.8	(2)	(2)	39.2
Franklin	1.9	24.2	42.4	(2)	25.0	40.6	(2)	26.2
Madison	1.1	7.8	9.5	41.6	8.3	16.0	42.4	11.1
Morehouse	1.6	10.9	11.8	27.6	11.8	11.6	27.7	16.5
Richland	3.1	41.5	16.6	(2)	42.8	18.8	(2)	43.3
Tensas	1.4	12.8	19.4	31.6	13.5	20.3	32.2	17.9
West Carroll	2.5	...	...	...	...	...	...	...
All parishes	0.6	5.3	8.7	17.5	5.6	8.2	17.7	6.9

¹By random-sampling formula.

²Sampling error greater than 50.

growing-stock definition changes. Finally, to further enhance trend analysis, a slight improvement in precision was made in the 1984 volume estimates by using all the deterministic measurements from the 1991 survey to develop new volume coefficients. Therefore, because of the change in the growing-stock standard and the improved volume coefficients, estimates for the reprocessed 1984 data may differ slightly from those previously published.

STATISTICAL RELIABILITY

The sampling methods were designed to give reliable estimates of area and volume at the State level in accordance with acceptable sampling error standards. Subsequently, the sampling error of the estimates increases as the area or volume under consideration decreases. The sampling errors presented in table I are equal to one standard deviation for the sample data.

Results are reported by individual parishes, thereby allowing computation of statistical confidence for any combination of parishes. Sampling error may be estimated by using the following formula:

$$SE_g = \frac{SE_t \sqrt{X_t}}{\sqrt{X_g}}$$

where:

SE = standard error of estimate
(expressed as a percentage)

X = variable of interest
(area or volume)

g = group of parishes to be combined

t = total for the unit.

For example, statistics for growing-stock volume in East Carroll, Madison, and Tensas parishes are derived as follows:

$$SE_g = \frac{5.6 \sqrt{1,346.1}}{\sqrt{409.5}} = \frac{5.6 \times 36.69}{20.24} = 10.2 \text{ percent}$$

The 95-percent confidence interval is:

$$409.5 \pm 1.96 (0.102 \times 409.5) = 409.5 \pm 81.9$$

The sampling error for growing-stock volume for the three parishes is 10.2 percent. The 95-percent confidence interval is 327.6 to 491.4 million cubic feet. This interval covers the true growing-stock inventory volume for these three parishes unless a 1 in 20 chance of a random event has occurred.

HIGHLIGHTS

Timberland Area

Currently, the estimate for timberland area is 945.5 thousand acres. This is a slight increase from the 1984 estimate of 913.5 thousand acres.

Forest Type

The predominant forest type in the North Delta Louisiana unit is oak-gum-cypress at 614.9 thousand acres. This is a 59.1-thousand acre increase from the 1984 estimate. Second in dominance is the loblolly-shortleaf pine type, occurring on 147.3 thousand acres of timberland.

Ownership

Nonindustrial private timberland has increased from 380.5 thousand acres in 1984 to 534.0 thousand acres, currently. In contrast, forest industry acreage decreased, from 364.8 thousand acres to 253.4 thousand acres.

Stand Size

Most of the timberland in the North Delta unit is in sawtimber stands, 622.7 thousand acres. This is 66 percent of total timberland in the unit and represents a slight increase from that reported in 1984. The acreage in poletimber and

Table II—Components of annual change in the volume of live trees by inventory period and species group, North Delta Louisiana Parishes, 1991

Inventory period and species group	Gross growth		
	Net growth	Mortality	Removals
-----Million cubic feet-----			
1974 to 1983:			
Softwoods	13.8	0.5	11.0
Hardwoods	38.3	15.9	49.9
Total	52.1	16.4	60.9
1984 to 1991:			
Softwoods	13.7	2.4	10.8
Hardwoods	50.5	12.7	42.3
Total	64.2	15.1	53.2

sapling-seedling stands is unchanged from the previous survey.

Softwood Volume

Softwood live-tree volume is currently 272.3 million cubic feet, a slight increase from the 246.3 million cubic feet reported in 1984. Eighty-three percent of the softwood volume is in loblolly pine.

Hardwood Volume

Hardwood live-tree volume is essentially unchanged from that reported in 1984. The current estimate is 1,203.6 million cubic feet; the 1984 estimate was 1,196.5 million cubic feet. The plurality of volume is in the other red oaks group, 260.7 million cubic feet (22 percent of hardwood volume). Another notable species is sweetgum with 218.4 million cubic feet. Together, the other red oaks and sweetgum make up 40 percent of the hardwood volume in the unit.

Growth

Softwood live-tree gross growth averages 16.1 million cubic feet per year, a slight increase from the previous survey period when it averaged 14.3 million cubic feet annually (table II). Softwood gross growth averages 17 cubic feet per acre per year for the current survey period.

Hardwood live-tree gross growth averages 63.2 million cubic feet per year, up 17 percent from the 54.2 million cubic feet per year reported in 1984 (table II). The per acre average for hardwood gross growth is currently 67 cubic feet per year.

Removals

The removal of live-tree softwood volume remains unchanged from the previous survey period. Current removals are 10.8 million cubic feet annually; previous survey removals averaged 11.0 million cubic feet per year (table II).

Hardwood live-tree removals decreased slightly. They are averaging 42.3 million cubic feet per year for the current

period, a 15-percent decrease from the 49.9 million cubic feet per year reported for the prior survey (table II).

Mortality

Live-tree mortality has increased slightly for softwoods and decreased slightly for hardwoods. Currently, softwood mortality is averaging 2.4 million cubic feet per year; hardwood mortality is averaging 12.7 million cubic feet per year (table II).

Stand Structure

The average basal area of live trees on timberland in the North Delta unit has decreased slightly, from 88.8 square feet per acre in 1984 to 84.9 square feet per acre, currently. The major components of total basal area were hardwood sawtimber and hardwood poletimber. Proportionately, they contributed 48 and 24 percent, respectively, to the total basal area.

The total number of live trees has decreased only slightly (4 percent) from the 1984 estimate. Most of the decrease is in the 2- and 4-inch diameter classes.

APPENDIX

Definition of Terms

Forest Land Classes

Forest land—Land at least 16.7 percent stocked by forest trees of any size, or formerly having such tree cover, and not currently developed for nonforest uses. Minimum area considered for classification is one acre. Forest land is divided into a commercial category: timberland; and two noncommercial categories: reserved timberland or woodland.

Timberland—Forest land that is producing, or is capable of producing, crops of industrial wood and not withdrawn from timber utilization. Timberland is synonymous with "commercial forest land" in prior reports.

Reserved timberland—Productive public forest land withdrawn from timber utilization through statute or administrative regulations.

Woodland—Forest land incapable of yielding crops of industrial wood because of adverse site conditions.

Ownership Classes

National Forest land—Federal lands that have been legally designated as National Forests or purchase units and other lands under the administration of the Forest Service, including experimental areas.

Other federal land—Federal lands other than National Forests.

State, county, and municipal lands—Lands owned by States, counties and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

Forest industry land—Lands owned by companies or individuals operating wood-using plants (either primary or secondary).

Farmer-owned land—Lands operated as a unit of 10 acres or more and from which the sale of agricultural products totals \$1,000 or more annually.

Nonindustrial private land (individual)—Lands privately owned by individuals other than forest industries, farmers, or miscellaneous private corporations.

Nonindustrial private land (corporate)—Lands privately owned by private corporations other than forest industries and incorporated farms.

Forest Types

Longleaf-slash pine—Forests in which longleaf or slash pine, singly or in combination, comprise a plurality of the stocking. Common associates include other southern pines, oaks, and gums.

Loblolly-shortleaf pine—Forests in which pines (except longleaf or slash pine) and eastern redcedar singly or in combination, comprise a plurality of the stocking. Common associates include oaks, hickories, and gums.

Oak-pine—Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking, but in which softwoods, except cypress, comprise 25-49 percent of the stocking. Common associates include gums, hickories, and yellow-poplar.

Oak-hickory—Forests in which upland oaks or hickories, singly or in combination, comprise a plurality of the stocking except where pines comprise 25-50 percent in which case the stand would be classified oak-pine. Common associates include yellow-poplar, elms, maples, and black walnut.

Oak-gum-cypress—Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprise a plurality of the stocking except where pines comprise 25-50 percent, in which case the stand would be classified oak-pine. Common associates include cottonwood, willow, ashes, elms, hackberries, and maples.

Elm-ash-cottonwood—Forests in which elms, ashes, or cottonwood, singly or in combination, comprise a plurality of the stocking. Common associates include willow, sycamore, beech, and maples.

Nontyped—Timberland currently unoccupied with any live trees or seedlings, e.g., very recent clearcut areas.

Tree Classes

Commercial species—Tree species currently or potentially suitable for industrial wood products. Excluded are noncommercial species.

Noncommercial species—Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

Growing-stock trees—Living trees of commercial species. Trees must have one 12-foot or two 8-foot logs currently or potentially to be classed as growing stock. The log(s) must meet dimension and merchantability standards to qualify. Trees must also have, currently or potentially (if too small to qualify), one-third of the gross board-foot volume in sound wood.

Rough trees—Live trees of commercial species that are unmerchantable for sawlogs currently or potentially because of roughness or poor form in the sawlog section. Also included are all live trees of noncommercial species. See growing-stock definition.

Rotten trees—Live trees of commercial species that are unmerchantable for sawlogs currently or potentially because of rot deduction in the sawlog section. See growing-stock definition.

Cull trees—Rough or rotten trees.

Hardwoods—Dicotyledonous trees, usually broad leaved and deciduous.

Softwoods—Coniferous trees, usually evergreen, having needle or scalelike leaves.

Live trees—All trees alive. Included are all size classes (≥ 1.0 inch in d.b.h.), all tree classes, and both commercial and noncommercial species.

Salvable dead trees—Standing or downed dead trees that were formerly growing stock and are considered merchantable. Trees must be ≥ 5.0 inches in d.b.h. to qualify.

Dimension Classes of Trees

Sawtimber trees—Trees 9.0 inches and larger in d.b.h. for softwoods, and 11.0 inches and larger for hardwoods.

Poletimber trees—5.0 to 8.9 inches in d.b.h. for softwoods and 5.0 to 10.9 inches in d.b.h. for hardwoods.

Saplings—Trees 1.0 inch to 4.9 inches in d.b.h.

Seedlings—Trees which are less than 1.0 inch in d.b.h. and greater than 1 foot tall for hardwoods, greater than 6 inches tall for softwoods, and greater than 1/2 inch in diameter at ground level for longleaf pine.

Rough, rotten, and salvable dead trees—See "tree classes."

Stand-Size Classes

Sawtimber stands—Stands at least 16.7 percent stocked with live trees, half or more of this stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands—Stands at least 16.7 percent stocked with live trees, half or more of this stocking in sawtimber or

poletimber trees, and with poletimber stocking exceeding that of sawtimber stocking.

Sapling-seedling stands—Stands at least 16.7 percent stocked with live trees, more than half of this stocking in saplings or seedlings.

Nonstocked stands—Stands less than 16.7 percent stocked with live trees.

Stocking

Stocking is a measure of the extent to which the growth potential of the site is utilized by trees or preempted by vegetative cover. Stocking is determined by comparing the stand density in terms of number of trees or basal area with a specified standard. Therefore, full stocking is 100 percent of the stocking standard.

The following tabulation by size class shows the density standard in terms of trees required per acre, for full stocking:

D.b.h. (inches)	Number of trees	D.b.h. (inches)	Number of trees
Seedlings	600	16	72
2	560	18	60
4	460	20	51
6	340	22	42
8	240	24	36
10	155	26	31
12	115	28	27
14	90	30	24

Volume

Volume of cull—Volume of sound wood in the bole of rough and rotten trees.

Volume of growing stock—Volume of sound wood in the bole of growing-stock trees from a 1-foot stump to a minimum 4.0-inch top outside bark or to the point where the central stem breaks into limbs. Rough, rotten, and noncommercial trees are excluded. By definition, trees must be ≥ 5.0 inches in d.b.h.

Volume of sawtimber—Net volume of the sawlog portion of live sawtimber trees in board feet of the International 1/4-inch rule. Net volume equals gross volume less deductions for rot, sweep, and other defects that affect use for lumber to the point where the central stem breaks into limbs. Rough, rotten, and noncommercial trees are excluded.

Volume of live trees—The volume of sound wood in the bole of growing stock, rough, and rotten trees ≥ 5.0 inches in d.b.h. from a 1-foot stump to a minimum 4.0-inch top diameter outside bark or to the point where the central stem breaks into limbs.

Growth Classes

Gross growth—Total increase in stand volume computed on growing-stock trees or live trees ≥ 5.0 inches in d.b.h. Gross growth equals survivor growth plus ingrowth plus growth on removals plus growth on mortality plus cull increment plus mortality.

Net growth—Increase in stand volume, computed on growing-stock trees or live trees ≥ 5.0 inches in d.b.h. Net growth is equal to gross growth minus mortality.

Net change—Increase or decrease in stand volume, computed on growing-stock trees or live trees ≥ 5.0 inches in d.b.h. Net change is equal to net growth minus removals.

Miscellaneous Definitions

Basal area—The area in square feet of the cross section at breast height of a single tree or of all the trees in a stand, usually expressed in square feet per acre.

D.b.h. (diameter at breast height)—Tree diameter in inches, outside bark, measured at 4 1/2 feet above ground.

Diameter classes—The 2-inch diameter classes extend from 1.0 inch below to 0.9 inches above the stated midpoint. Thus, the 12-inch class includes trees 11.0 inches through 12.9 inches in d.b.h.

D.o.b. (diameter outside bark)—Stem diameter including bark.

Mortality—Number or sound-wood volume of live trees dying from natural causes during a specified period.

Plantations—Stands evidenced by regeneration from planting or artificial seeding.

Sawlog portion—That part of the bole of a sawtimber tree between a 1-foot stump and the sawlog top.

Sawlog top—The point on the bole of a sawtimber tree above which a sawlog cannot be produced. The minimum sawlog top is 7.0 inches in d.o.b. for softwoods and 9.0 inches in d.o.b. for hardwoods.

Select red oaks—A classification of several red oak species composed of: cherrybark, Shumard, and northern red oaks.

Select white oaks—A classification of several white oak species composed of: white, swamp chestnut, swamp white, chinkapin, Durand, and bur oaks.

Site classes—A classification of forest land in terms of potential capacity to grow crops of industrial wood.

Timber removals—The net volume of growing-stock trees removed from the inventory by harvesting or cultural operations such as timber-stand improvement, land clearing, or change in land use.

Tree grade—The grade classification assigned to a sawtimber tree, which is based upon: (1) the log grade of the butt log portion (the best 12 feet of first 16 feet), or (2) the presence of at least one 12-foot or two 8-foot logs in the upper sawlog portion when no butt log is present.

Upper-stem portion—That part of the main stem or fork of a sawtimber tree above the sawlog top to a diameter outside bark of 4.0 inches or to the point where the main stem or fork breaks into limbs.

Core Tables 1–25

Table 1—Area by parish and land class, North Delta Louisiana Parishes, 1991

Parish	All land ¹	Forest land			Reserved timberland	Nonforest land
		Total	Timberland ²	Woodland ³		
-----Thousand acres-----						
Catahoula	468.5	157.9	157.9	...	...	310.6
Concordia	458.9	151.1	151.1	...	...	307.8
East Carroll	272.4	43.4	43.4	...	...	229.0
Franklin	406.6	89.3	89.3	...	...	317.3
Madison	403.7	118.8	118.8	...	...	284.8
Morehouse	516.3	181.6	181.6	...	...	334.7
Richland	360.3	68.0	68.0	...	...	292.4
Tensas	398.5	116.4	116.4	...	...	282.1
West Carroll	230.3	18.9	18.9	...	...	211.4
All parishes	3515.7	945.5	945.5	...	...	2570.2

¹From U.S. Bureau of the Census.

²Forest land (formerly termed commercial forest land) that is producing or capable of producing at least 20 cubic feet of industrial wood per acre per year. Includes areas which may be inaccessible or inoperable by current standards. Excludes reserved timberlands.

³Forest land incapable of producing 20 cubic feet of industrial wood per acre per year under natural conditions because of adverse site conditions.

Table 2—Area of timberland by parish and ownership class, North Delta Louisiana Parishes, 1991

Parish	All ownerships	National forest	Misc. federal	State	Parish and municipal	Forest industry ¹	Farmer	Corporate ²	Individual ²
-----Thousand acres-----									
Catahoula	157.9	...	...	22.6	...	75.2	22.6	15.0	22.6
Concordia	151.1	...	5.4	37.8	5.4	10.8	5.4	37.8	48.6
East Carroll	43.4	...	...	...	5.4	21.7	...	...	16.3
Franklin	89.3	...	...	6.9	6.9	13.7	48.1	...	13.7
Madison	118.8	...	33.0	...	...	33.0	33.0	6.6	13.2
Morehouse	181.6	...	...	...	23.4	87.8	...	11.7	58.6
Richland	68.0	...	...	...	11.3	...	11.3	22.7	22.7
Tensas	116.4	...	...	...	...	11.1	22.2	5.5	77.6
West Carroll	18.9	...	...	...	...	...	...	...	18.9
All parishes	945.5	...	38.4	67.2	52.4	253.4	142.6	99.3	292.1

¹Includes land leased to forest industry.

²Indian land will be classed as corporate or individual as defined by the Bureau of Indian Affairs.

Table 3—Area of timberland by parish and forest type group, North Delta Louisiana
Parishes, 1991

Parish	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
-----Thousand acres-----							
Catahoula	157.9	22.6	22.6	30.1	7.5	67.7	7.5
Concordia	151.1	...	...	...	...	129.5	21.6
East Carroll	43.4	...	...	...	...	21.7	21.7
Franklin	89.3	20.6	...	...	6.9	55.0	6.9
Madison	118.8	...	...	...	...	112.2	6.6
Morehouse	181.6	11.7	58.6	23.4	11.7	70.3	5.9
Richland	68.0	11.3	...	...	11.3	45.3	...
Tensas	116.4	...	...	...	...	94.3	22.2
West Carroll	18.9	...	...	...	...	18.9	...
All parishes	945.5	66.2	81.1	53.5	37.4	614.9	92.3

Table 4—Area of timberland by parish and stand-size class, North Delta Louisiana Parishes, 1991

Parish	All classes	Stand-size class			Nonstocked ¹ areas
		Sawtimber	Poletimber	Sapling- seedling	
		-----Thousand acres-----			
Catahoula	157.9	90.3	37.6	30.1	...
Concordia	151.1	124.1	10.8	16.2	...
East Carroll	43.4	21.7	16.3	...	5.4
Franklin	89.3	55.0	...	34.3	...
Madison	118.8	72.6	33.0	13.2	...
Morehouse	181.6	123.0	35.1	23.4	...
Richland	68.0	34.0	...	34.0	...
Tensas	116.4	83.2	22.2	11.1	...
West Carroll	18.9	18.9	...	...	...
All parishes	945.5	622.7	155.0	162.3	5.4

¹Timberland less than 16.7 percent stocked.

Table 5—Area of timberland by parish and site class, North Delta Louisiana
Parishes, 1991

Parish	All classes	Site class (cubic feet/acre/year)				
		> 165	120-165	85-120	50-85	< 50
-----Thousand acres-----						
Catahoula	157.9	30.1	37.6	45.1	45.1	...
Concordia	151.1	64.8	43.2	21.6	21.6	...
East Carroll	43.4	32.6	...	10.9	...	...
Franklin	89.3	13.7	34.3	34.3	6.9	...
Madison	118.8	39.6	46.2	26.4	6.6	...
Morehouse	181.6	11.7	76.1	76.1	17.6	...
Richland	68.0	...	56.6	11.3	...	...
Tensas	116.4	55.4	33.3	16.6	11.1	...
West Carroll	18.9	...	...	18.9	...	...
All parishes	945.5	247.9	327.4	261.3	108.8	...

Table 6—Area of timberland by parish and stocking classes of growing-stock trees, North Delta Louisiana Parishes, 1991

Parish	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
-----Thousand acres-----						
Catahoula	157.9	...	60.2	82.7	15.0	...
Concordia	151.1	...	21.6	91.8	37.8	...
East Carroll	43.4	...	...	21.7	16.3	5.4
Franklin	89.3	13.7	13.7	34.3	13.7	13.7
Madison	118.8	...	6.6	79.2	33.0	...
Morehouse	181.6	5.9	46.9	93.7	35.1	...
Richland	68.0	...	22.7	34.0	...	11.3
Tensas	116.4	5.5	22.2	55.4	33.3	...
West Carroll	18.9	...	...	...	18.9	...
All parishes	945.5	25.1	193.8	492.9	203.2	30.5

Table 7—Area of timberland by forest type and ownership class, North Delta Louisiana Parishes, 1991

Forest type ¹	All ownerships	National forest	Other public	Forest industry	Forest industry-leased	Other private
-----Thousand acres-----						
Loblolly-shortleaf pine	147.3	...	26.4	96.5	...	24.4
Softwood total	147.3	...	26.4	96.5	...	24.4
Oak-pine	53.5	...	...	34.3	...	19.2
Oak-hickory	37.4	...	...	7.5	...	29.9
Oak-gum-cypress	614.9	...	120.9	91.8	5.4	396.8
Elm-ash-cottonwood	92.3	...	10.8	17.9	...	63.6
Hardwood total	798.1	...	131.7	151.5	5.4	509.6
All types	945.5	...	158.1	248.0	5.4	534.0

¹Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

Table 8—Area of timberland by ownership class and stocking classes of growing-stock trees, North Delta Louisiana Parishes, 1991

Ownership class	All classes	Stocking class (percent)				
		> 130	100-130	60-100	16.7-60	< 16.7
-----Thousand acres-----						
Other public	158.1	...	38.4	86.4	33.3	...
Forest industry	248.0	6.9	67.9	130.7	42.5	...
Forest industry-leased	5.4	...	...	5.4	...	...
Other private	534.0	18.3	87.5	270.4	127.3	30.5
All ownerships	945.5	25.1	193.8	492.9	203.2	30.5

Table 9—Area of timberland by forest type and stand-size class, North Delta Louisiana Parishes, 1991

Forest type ¹	All classes	Stand-size class			Nonstocked ² areas
		Sawtimber	Poletimber	Sapling- seedling	
		-----Thousand acres-----			
Loblolly-shortleaf pine	147.3	100.7	20.9	25.7	...
Softwood total	147.3	100.7	20.9	25.7	...
Oak-pine	53.5	19.2	22.6	11.7	...
Oak-hickory	37.4	5.9	5.9	25.7	...
Oak-gum-cypress	614.9	464.2	83.7	66.9	...
Elm-ash-cottonwood	92.3	32.7	21.9	32.2	5.4
Hardwood total	798.1	522.0	134.1	136.6	5.4
All types	945.5	622.7	155.0	162.3	5.4

¹Forest type is based on species plurality of all live trees. Mixed types that in combination contain a majority of hardwood stocking are hardwood types.

²Timberland less than 16.7 percent stocked.

Table 10—Number of live trees on timberland by species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
-----Thousand trees-----													
Longleaf-slash pines	279	...	...	...	51	...	111	100	18	...	...	...	...
Shortleaf-loblolly pines	73942	32706	20308	9244	4334	2715	1802	979	828	515	271	240	...
Cypress	1849	690	...	102	301	75	235	164	124	23	33	68	34
Total softwoods	76070	33396	20308	9346	4685	2791	2148	1242	969	538	304	309	34
Select white oaks	4215	1260	1379	395	273	402	126	173	104	...	55	29	18
Select red oaks	5648	2300	1764	703	182	96	239	69	56	30	68	129	11
Other white oaks	15627	5017	3165	2727	1388	1099	718	369	261	302	149	352	81
Other red oaks	33628	15616	4749	2745	3014	1757	2046	1006	744	488	475	771	218
Hickory	22443	12874	4149	1143	1177	1076	607	389	299	249	223	166	91
Hard maple	1164	508	508	90	...	57	...	...	...	...	...	...	...
Soft maple	14161	11659	...	765	919	378	336	...	63	22	20	...	...
Beech	455	...	...	207	...	49	70	...	42	18	12	55	4
Sweetgum	46131	22652	9443	4124	2771	2697	1544	1041	695	515	286	335	27
Tupelo-blackgum	4710	3680	...	367	83	95	114	171	72	61	33	33	...
Ash	22263	13353	2906	2214	1336	955	561	222	328	91	172	125	...
Cottonwood-aspen	3199	...	1017	670	348	344	225	190	77	105	75	107	42
Yellow-poplar	177	...	...	154	...	...	...	...	23	...	...	...	...
Other hardwoods	135795	85403	20744	11644	7238	3774	2680	1453	1140	637	482	521	79
Total hardwoods	309617	174323	49823	27948	18730	12780	9265	5082	3904	2516	2051	2622	571
Noncommercial	32178	27100	2424	1648	614	273	53	66	...	...	...	...	...
All species	417865	234818	72556	38942	24029	15844	11467	6391	4873	3054	2355	2931	605

Table 11—Number of growing-stock trees on timberland by species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)											
		1.0- 2.9	3.0- 4.9	5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
-----Thousand trees-----													
Longleaf-slash pines	279	...	...	...	51	...	111	100	18	...	...	...	...
Shortleaf-loblolly pines	62726	24657	17762	8878	4191	2663	1742	979	828	515	271	240	...
Cypress	1667	690	...	...	301	75	198	145	124	23	33	58	20
Total softwoods	64673	25347	17762	8878	4543	2738	2051	1224	969	538	304	299	20
Select white oaks	3439	630	1379	395	220	402	126	102	90	...	55	21	18
Select red oaks	4982	1764	1764	575	182	96	239	69	56	30	68	129	11
Other white oaks	11280	3295	2148	1942	1141	897	571	349	246	264	100	289	40
Other red oaks	18767	4969	1900	2214	2878	1605	1732	941	744	448	437	723	175
Hickory	8675	3083	1032	633	1129	1029	518	345	262	249	174	137	84
Hard maple	90	...	...	90	...	...	...	...	...	...	...	...	...
Soft maple	5858	4490	...	355	508	208	230	...	46	11	10	...	...
Beech	389	...	...	207	...	49	38	...	21	18	12	44	...
Sweetgum	25228	9895	2988	3545	2457	2309	1335	920	678	488	277	318	18
Tupelo-blackgum	2190	1379	...	168	83	95	114	171	72	61	23	23	...
Ash	9556	3717	1611	1331	1004	732	457	176	239	79	127	83	...
Cottonwood-aspen	3135	...	1017	670	348	344	199	154	77	105	75	107	39
Yellow-poplar	177	...	...	154	...	...	...	...	23	...	...	...	...
Other hardwoods	53251	23950	6489	8710	6141	3167	1797	1059	709	445	342	399	43
Total hardwoods	147018	57172	20327	20989	16092	10935	7356	4287	3263	2196	1701	2273	428
All species	211690	82519	38089	29867	20635	13673	9407	5511	4231	2734	2004	2571	448

Table 12—Volume of growing stock on timberland by species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)									
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
-----Million cubic feet-----											
Longleaf-slash pines	7.0	...	0.6	...	2.5	3.2	0.7	...	...	...	...
Shortleaf-loblolly pines	238.9	18.5	24.3	30.1	32.2	28.8	34.5	29.3	18.5	22.7	...
Cypress	21.4	...	1.2	1.4	2.5	2.3	4.0	1.3	1.9	4.2	2.6
Total softwoods	267.3	18.5	26.2	31.5	37.2	34.3	39.1	30.6	20.4	26.9	2.6
Select white oaks	22.1	0.8	1.3	4.5	2.2	3.1	3.4	...	2.9	1.3	2.6
Select red oaks	27.5	1.3	1.0	1.4	4.0	1.8	2.2	1.1	3.9	9.4	1.6
Other white oaks	80.1	5.8	6.0	8.1	9.1	7.4	6.9	9.0	4.5	18.4	4.8
Other red oaks	246.2	6.0	17.9	15.1	32.4	24.3	25.6	18.7	24.6	53.4	28.1
Hickory	95.6	1.3	6.8	9.7	8.6	8.3	8.6	10.6	11.0	13.1	17.6
Hard maple	0.4	0.4	...	...	...	...	...	...	...	...	...
Soft maple	14.1	1.3	3.3	2.9	4.0	...	1.5	0.7	0.4	...	...
Beech	6.9	0.4	...	0.4	0.7	...	0.6	0.8	0.7	3.3	...
Sweetgum	207.0	8.2	14.7	26.7	26.2	28.9	28.8	25.6	18.0	27.8	2.1
Tupelo-blackgum	20.8	0.9	0.5	1.4	2.9	5.3	3.7	3.8	1.0	1.3	...
Ash	51.8	3.8	6.9	7.8	7.2	4.0	8.3	3.1	6.1	4.8	...
Cottonwood-aspen	52.4	1.8	1.2	4.9	4.7	5.6	3.5	6.5	5.5	12.2	6.5
Yellow-poplar	0.9	0.4	...	...	...	...	0.5	...	...	...	...
Other hardwoods	252.9	24.2	35.1	33.2	28.5	26.5	24.5	19.7	20.1	33.5	7.6
Total hardwoods	1078.8	56.5	94.8	116.1	130.5	115.2	118.0	99.6	98.7	178.5	70.9
All species	1346.1	75.0	121.0	147.6	167.7	149.5	157.1	130.2	119.1	205.4	73.6

Table 13—*Volume of growing stock in the sawlog portion of sawtimber¹ trees on timberland by species and diameter class, North Delta Louisiana Parishes, 1991*

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>-----Million cubic feet-----</i>									
Longleaf-slash pines	5.8	...	2.3	2.9	0.6	...	...	...	...
Shortleaf-loblolly pines	176.5	24.0	28.2	25.6	31.9	27.6	17.5	21.8	...
Cypress	18.2	1.2	2.0	2.1	3.7	1.2	1.7	4.0	2.1
Total softwoods	200.5	25.2	32.5	30.6	36.2	28.8	19.2	25.8	2.1
Select white oaks	12.6	...	1.5	2.5	2.8	...	2.4	1.1	2.3
Select red oaks	20.9	...	3.3	1.6	2.0	0.9	3.5	8.4	1.4
Other white oaks	50.3	...	6.8	6.1	5.5	8.0	4.0	16.0	4.0
Other red oaks	175.2	...	24.3	19.9	22.2	16.4	21.7	45.8	25.0
Hickory	65.0	...	6.6	6.8	7.0	8.7	9.2	11.2	15.6
Soft maple	5.1	...	2.9	...	1.3	0.6	0.3	...	...
Beech	5.1	...	0.5	...	0.5	0.7	0.5	2.9	...
Sweetgum	132.5	...	19.0	24.4	24.7	22.5	15.6	24.3	1.9
Tupelo-blackgum	16.1	...	2.6	4.5	3.4	3.5	1.0	1.1	...
Ash	27.4	...	4.5	3.2	7.2	2.9	5.2	4.3	...
Cottonwood-aspen	39.5	...	3.3	4.8	3.0	6.0	5.0	11.4	6.1
Yellow-poplar	0.4	...	...	...	0.4	...	...	...	...
Other hardwoods	134.1	...	20.2	22.1	21.0	17.0	17.5	29.2	7.1
Total hardwoods	684.2	...	95.5	95.9	101.0	87.1	85.8	155.7	63.3
All species	884.7	25.2	128.0	126.5	137.1	115.9	105.0	181.5	65.4

¹That part of the bole of sawtimber trees between a 1-foot stump and sawlog top.

Table 14—*Volume of sawtimber on timberland by species and diameter class, North Delta Louisiana Parishes, 1991*

Species	Diameter class (inches at breast height)								
	All classes	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>-----Million board feet-----</i>									
Longleaf-slash pines	35.1	...	13.3	18.1	3.8	...	...	...	...
Shortleaf-loblolly pines	1081.6	125.0	161.1	157.8	199.5	179.9	111.6	146.6	...
Cypress	97.7	6.9	9.2	10.1	19.8	7.2	9.8	21.3	13.4
Total softwoods	1214.5	131.9	183.6	186.0	223.1	187.0	121.4	168.0	13.4
Select white oaks	74.9	...	7.7	13.8	15.9	...	16.3	6.3	15.0
Select red oaks	126.5	...	18.2	9.2	11.2	5.9	21.2	52.9	8.0
Other white oaks	301.7	...	36.1	34.2	31.0	46.5	24.7	101.4	27.8
Other red oaks	1052.2	...	131.4	114.1	129.2	97.0	135.3	288.7	156.5
Hickory	408.7	...	37.8	40.1	42.6	52.0	59.9	73.5	102.8
Soft maple	29.0	...	15.3	...	8.2	4.1	1.5	...	...
Beech	32.9	...	2.8	...	2.9	4.6	3.2	19.3	...
Sweetgum	774.7	...	104.6	144.4	140.9	134.3	94.4	145.8	10.3
Tupelo-blackgum	105.2	...	17.6	28.2	22.7	24.5	5.7	6.6	...
Ash	147.4	...	21.4	18.0	41.5	15.7	28.0	22.7	...
Cottonwood-aspen	240.1	...	18.7	28.5	19.4	37.3	31.9	69.3	35.1
Yellow-poplar	2.6	...	...	...	2.6	...	...	...	...
Other hardwoods	778.1	...	104.4	129.1	123.0	102.2	106.4	174.6	38.4
Total hardwoods	4074.2	...	515.9	559.5	591.1	524.1	528.4	961.2	394.0
All species	5288.6	131.9	699.5	745.5	814.2	711.1	649.8	1129.1	407.4

Table 15—*Volume of growing stock and sawtimber on timberland by parish and species group, North Delta Louisiana Parishes, 1991*

Parish	Growing stock						Sawtimber					
	Softwood			Hardwood			Softwood			Hardwood		
	All species	Pine			Soft ¹	Hard ²	All species	Pine			Soft ¹	Hard ²
		Planted	Natural	Other				Planted	Natural	Other		
-----Million cubic feet-----												
Catahoula	190.4	15.4	52.4	4.1	38.1	80.3	670.8	18.1	202.1	14.7	115.3	320.7
Concordia	269.9	...	...	8.7	159.7	101.5	1165.5	...	...	46.2	662.7	456.7
East Carroll	48.4	...	...	1.2	36.3	11.0	181.2	...	...	5.1	120.0	56.1
Franklin	126.1	29.7	...	5.7	44.1	46.7	529.7	133.7	...	24.1	165.3	206.6
Madison	170.5	...	...	...	86.2	84.3	611.0	...	...	...	289.1	321.9
Morehouse	268.7	25.9	122.4	...	24.2	96.2	1124.3	131.3	631.6	...	60.1	301.3
Richland	61.3	...	...	1.8	30.0	29.6	209.1	...	...	7.7	91.7	109.7
Tensas	190.6	...	...	...	94.0	96.6	770.4	...	...	...	340.9	429.5
West Carroll	20.1	...	...	...	13.6	6.5	26.6	...	...	...	26.6	...
All parishes	1346.1	71.0	174.8	21.4	526.2	552.6	5288.6	283.1	833.7	97.7	1871.6	2202.6

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 16—*Volume of timber on timberland by class of timber and species group, North Delta Louisiana Parishes, 1991*

Class of timber	All species	Softwood			Hardwood	
		Pine		Other	Soft ¹	Hard ²
		Planted	Natural			
----- <i>Million cubic feet</i> -----						
Sawtimber trees:						
Saw-log portion	884.7	48.2	134.1	18.2	317.3	366.8
Upper-stem portion	149.3	5.6	14.4	2.1	57.2	70.0
Total	1034.0	53.8	148.5	20.2	374.6	436.9
Poletimber trees	312.0	17.2	26.3	1.2	151.6	115.7
All growing-stock trees	1346.1	71.0	174.8	21.4	526.2	552.6
Rough trees:						
Sawtimber size	72.6	0.4	0.5	0.5	36.8	34.5
Poletimber size	38.5	...	1.5	0.4	16.2	20.4
Total	111.2	0.4	2.0	0.9	53.0	54.9
Rotten trees:						
Sawtimber size	16.3	...	...	1.8	7.0	7.5
Poletimber size	2.4	...	...	...	1.8	0.6
Total	18.7	...	...	1.8	8.8	8.1
Salvable dead trees:						
Sawtimber size	0.4	...	...	...	0.4	...
Poletimber size	1.0	...	...	0.2	0.5	0.3
Total	1.5	...	...	0.2	1.0	0.3
All classes	1477.4	71.4	176.8	24.4	589.0	615.8

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 17—*Volume of live trees and growing stock on timberland by ownership class and species group, North Delta Louisiana Parishes, 1991*

Ownership class	Live trees						Growing stock						
	All species	Softwood			Hardwood		All species	Softwood			Hardwood		
		Planted	Pine		Other	Soft ¹		Hard ²	Planted	Pine		Soft ¹	Hard ²
			Natural							Natural			

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 18—*Average net annual growth of growing stock and sawtimber on timberland by parish and species group, North Delta Louisiana Parishes, 1991*

Parish	Growing stock						Sawtimber						
	All species	Softwood			Hardwood		All species	Softwood			Hardwood		
		Planted	Pine		Other	Soft ¹		Hard ²	Planted	Pine		Soft ¹	Hard ²
			Natural							Natural			
		----- <i>Million cubic feet</i> -----						----- <i>Million board feet</i> -----					
Catahoula	9.3	1.1	2.7	0.1	2.4	3.0	33.5	2.2	13.0	0.7	7.4	10.2	
Concordia	7.5	...	...	...	5.2	2.4	31.6	...	...	...	22.4	9.2
East Carroll	1.8	...	...	0.2	1.4	0.1	10.0	...	...	1.1	7.9	1.0
Franklin	4.6	2.0	...	-0.5	1.0	2.2	27.3	12.9	...	-2.8	3.9	13.4	
Madison	10.2	...	...	...	5.1	5.1	41.8	...	...	...	19.5	22.2
Morehouse	14.8	1.6	7.0	...	0.3	5.8	73.1	11.7	37.3	...	4.0	20.0	
Richland	4.7	...	...	...	1.6	3.1	31.8	...	...	...	17.2	14.6
Tensas	8.1	...	...	...	4.0	4.1	39.9	...	...	...	19.2	20.7
West Carroll	1.2	...	...	...	-0.2	1.4	-0.1	...	...	...	-0.1	...
All parishes	62.3	4.7	9.7	-0.2	20.8	27.4	288.9	26.8	50.3	-1.0	101.5	111.3	

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 19—*Average annual removals of growing stock and sawtimber on timberland by parish and species group, North Delta Louisiana Parishes, 1991*

Parish	Growing stock						Sawtimber					
	Softwood				Hardwood		Softwood				Hardwood	
	All species	Pine			Soft ¹	Hard ²	All species	Pine			Soft ¹	Hard ²
		Planted	Natural	Other				Planted	Natural	Other		
-----Million cubic feet-----												
Catahoula	3.7	...	3.7	...	...	...	21.4	...	21.4	...	...
Concordia	7.9	...	...	...	6.8	1.0	38.5	...	...	...	33.0	5.5
East Carroll	4.3	...	...	...	3.6	0.7	20.2	...	...	...	16.3	3.9
Franklin	1.4	...	...	...	0.8	0.5	4.6	...	...	...	3.0	1.6
Madison	5.1	...	...	...	3.0	2.2	24.8	...	...	...	11.8	13.0
Morehouse	14.3	2.1	4.9	...	3.1	4.2	61.4	5.5	28.9	...	13.1	13.9
Richland	0.8	...	...	...	0.3	0.5	2.6	...	...	...	0.8	1.8
Tensas	13.6	...	...	...	9.7	3.9	47.8	...	...	...	32.2	15.6
West Carroll	...	...	...	...	...	...	...	...	...	...	...	...
All parishes	51.1	2.1	8.6	...	27.4	13.0	221.3	5.5	50.3	...	110.1	55.5

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 20—Average net annual growth and average annual removals of growing stock on timberland by species, North Delta Louisiana Parishes, 1991

Species	Growth	Removals
----- Million cubic feet -----		
Yellow pines	14.4	10.7
Total softwoods	14.2	10.7
Select white-red oaks	2.3	0.5
Other white-red oaks	19.0	7.6
Hickory	2.5	1.8
Sweetgum	8.8	7.0
Ash-walnut-black cherry	2.9	1.9
Yellow-poplar	0.2	...
Other hardwoods	12.5	21.5
Total hardwoods	48.2	40.4
All species	62.3	51.1

Table 21—Average net annual growth and average annual removals of sawtimber on timberland by species, North Delta Louisiana Parishes, 1991

Species	Growth	Removals
----- Million board feet -----		
Yellow pines	77.1	55.7
Total softwoods	76.1	55.7
Select white-red oaks	12.5	2.1
Other white-red oaks	79.0	33.9
Hickory	9.8	7.1
Sweetgum	51.1	22.9
Ash-walnut-black cherry	9.4	9.7
Yellow-poplar	0.3	...
Other hardwoods	50.8	90.0
Total hardwoods	212.8	165.6
All species	288.9	221.3

Table 22—Average annual mortality of growing stock and sawtimber on timberland by species, North Delta Louisiana Parishes, 1991

Species	Growing stock	Sawtimber
-- Million cubic feet -- -- Million board feet --		
Yellow pines	1.7	0.7
Other softwoods	0.3	1.1
Total softwoods	2.0	1.8
Other white-red oaks	0.7	2.4
Hickory	0.8	1.2
Sweetgum	1.8	0.6
Ash-walnut-black cherry	0.1	...
Other hardwoods	4.8	16.9
Total hardwoods	8.2	21.1
All species	10.2	22.9

Table 23—Average net annual growth and average annual removals of growing stock on timberland by ownership class and species group, North Delta Louisiana Parishes, 1991

Ownership class	Growth						Removals					
	All species	Softwood			Hardwood		All species	Softwood			Hardwood	
		Pine			Soft ¹	Hard ²		Pine			Soft ¹	Hard ²
		Planted	Natural	Other				Planted	Natural	Other		
-----Million cubic feet-----												
Other public	6.0	...	0.4	0.2	1.4	4.0	4.5	...	...	...	3.3	1.2
Forest industry	21.5	4.3	8.1	...	4.4	4.7	15.1	0.5	8.6	...	2.9	3.2
Forest industry-leased	0.3	...	...	...	0.3	...	0.4	...	...	...	0.4	...
Other private	34.6	0.4	1.3	-0.5	14.7	18.7	31.0	1.6	...	...	20.8	8.6
All ownerships	62.3	4.7	9.7	-0.2	20.8	27.4	51.1	2.1	8.6	...	27.4	13.0

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 24—Average net annual growth and average annual removals of sawtimber on timberland by ownership class and species group, North Delta Louisiana Parishes, 1991

Ownership class	Growth						Removals							
	All species	Softwood			Hardwood		All species	Softwood			Hardwood			
		Pine	Planted	Natural	Other	Soft ¹		Hard ²	Pine	Planted	Natural	Other	Soft ¹	Hard ²
-----Million board feet-----														
Other public	25.7	...	4.2	1.1	2.6	17.9	19.4	...	...	...	13.3	6.1
Forest industry	97.8	24.3	38.4	...	15.1	19.9	75.8	0.6	50.3	...	10.2	14.8		
Forest industry-leased	1.5	...	...	...	1.5	...	0.8	...	...	...	0.8	...
Other private	163.9	2.4	7.7	-2.1	82.3	73.6	125.3	4.9	...	...	85.8	34.6
All ownerships	288.9	26.8	50.3	-1.0	101.5	111.3	221.3	5.5	50.3	...	110.1	55.5		

¹Hardwood species with an average specific gravity of 0.50 or less such as gums, yellow-poplar, cottonwood, red maple, basswood, aspen, and willow.

²Hardwood species with an average specific gravity greater than 0.50 such as oaks, hard maple, hickories, and green and white ash.

Table 25—Volume of sawtimber on timberland by species and tree grade, North Delta Louisiana Parishes, 1991

Species	All grades	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5
-----Million board feet-----						
Yellow pines	1116.8	238.0	117.3	755.5	...	6.0
Cypress	97.7	11.9	4.0	77.4	...	4.4
Total softwoods	1214.5	249.9	121.4	832.9	...	10.4
Select white-red oaks	201.5	55.8	40.7	66.2	31.5	7.2
Other white-red oaks	1354.0	262.6	217.0	526.9	280.4	67.0
Hickory	408.7	93.7	84.8	135.3	85.9	9.1
Sweetgum	774.7	182.1	200.4	285.8	28.5	77.9
Tupelo and blackgum	105.2	5.0	8.8	89.2	...	2.2
Ash-walnut-black cherry	147.4	50.7	34.2	53.7	5.1	3.8
Yellow-poplar	2.6	...	...	...	2.6	...
Other hardwoods	1080.1	175.9	164.7	439.4	198.2	102.0
Total hardwoods	4074.2	825.7	750.7	1596.5	632.2	269.2
All species	5288.6	1075.5	872.0	2429.3	632.2	279.6

Supplemental Tables 26-43

Table 26—Area of timberland by stand age, forest type group and stand origin, North Delta Louisiana Parishes, 1991

Stand age class	Pine		Oak-pine		Other hardwood types	
	Artificial	Natural	Artificial	Natural	Artificial	Natural
-----Thousand acres-----						
1-10	25.7	...	...	...	11.0	39.1
11-20	...	11.7	...	...	...	...
21-30	13.4	7.5	...	...	10.9	6.6
31-40	6.9	...	...	...	...	...
41-50	...	...	...	...	...	...
> 50	...	...	...	...	...	...
Mixed	20.2	61.9	5.9	47.7	...	677.1
Total	66.2	81.1	5.9	47.7	21.8	722.8

Table 27—Volume of softwood growing stock on timberland by parish and forest type group, North Delta Louisiana Parishes, 1991

Parish	Total	Forest type group				
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress
		Planted	Natural			
-----Million cubic feet-----						
Catahoula	71.9	15.4	37.6	14.5	...	4.4
Concordia	8.7	...	...	...	...	8.7
East Carroll	1.2	...	...	...	...	1.2
Franklin	35.4	29.7	...	...	...	5.7
Madison	...	...	...	...	...	...
Morehouse	148.3	18.3	101.8	21.2	4.8	2.2
Richland	1.8	...	...	...	...	1.8
Tensas	...	...	...	...	...	...
West Carroll	...	...	...	...	...	...
All parishes	267.3	63.4	139.5	35.7	4.8	23.9

Table 28—*Volume of hardwood growing stock on timberland by parish and forest type group, North Delta Louisiana Parishes, 1991*

Forest type group							
Parish	Total	Loblolly-shortleaf pine		Oak-pine	Oak-hickory	Oak-gum-cypress	Elm-ash-cottonwood
		Planted	Natural				
-----Million cubic feet-----							
Catahoula	118.5	1.8	9.5	26.4	5.4	75.4	...
Concordia	261.2	...	...	...	...	210.4	50.8
East Carroll	47.3	...	...	...	...	22.9	24.4
Franklin	90.7	11.4	...	...	...	78.8	0.4
Madison	170.5	...	...	...	...	164.1	6.4
Morehouse	120.4	2.2	17.5	3.7	9.4	87.6	...
Richland	59.5	...	...	...	...	59.5	...
Tensas	190.6	...	...	...	...	151.7	38.9
West Carroll	20.1	...	...	...	...	20.1	...
All parishes	1078.8	15.4	27.0	30.0	14.8	870.6	120.9

Table 29—*Volume of softwood growing stock in the sawlog portion of sawtimber trees on timberland by forest type group, North Delta Louisiana Parishes, 1991*

Parish	Total	Forest type group				
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress
		Planted	Natural			
----- <i>Million cubic feet</i> -----						
Catahoula	40.4	3.4	25.3	8.0	...	3.6
Concordia	7.6	...	...	...	...	7.6
East Carroll	1.1	...	...	...	...	1.1
Franklin	27.7	23.0	...	...	...	4.7
Madison	...	...	...	...	...	...
Morehouse	122.0	15.4	82.9	17.7	4.0	1.9
Richland	1.7	...	...	...	...	1.7
Tensas	...	...	...	...	...	...
West Carroll	...	...	...	...	...	...
All parishes	200.5	41.8	108.3	25.8	4.0	20.7

Table 30—*Volume of hardwood growing stock in the sawlog portion of sawtimber trees on timberland by forest type group, North Delta Louisiana Parishes, 1991*

Parish	Total	Forest type group					
		Loblolly-shortleaf pine		Oak- pine	Oak- hickory	Oak-gum- cypress	Elm-ash- cottonwood
		Planted	Natural				
-----Million cubic feet-----							
Catahoula	73.6	0.5	4.8	14.0	2.8	51.5	...
Concordia	185.2	...	...	...	...	144.3	40.9
East Carroll	29.8	...	...	...	...	17.5	12.2
Franklin	61.7	3.9	...	...	...	57.8	...
Madison	104.8	...	...	...	...	100.0	4.8
Morehouse	61.3	...	8.0	1.6	3.8	48.0	...
Richland	34.8	...	...	...	...	34.8	...
Tensas	128.1	...	...	...	...	105.0	23.1
West Carroll	4.8	...	...	...	...	4.8	...
All parishes	684.2	4.4	12.8	15.5	6.6	563.8	81.1

Table 31 – Volume of timber on timberland by parish, class of timber and species group, North Delta Louisiana Parishes, 1991

Parish	All classes	Growing stock		Rough		Rotten	
		Softwood	Hardwood	Softwood	Hardwood	Softwood	Hardwood
		-----Million cubic feet-----					
Catahoula	208.1	71.9	118.5	1.9	14.5	...	1.4
Concordia	291.5	8.7	261.2	0.3	13.6	1.8	6.0
East Carroll	53.3	1.2	47.3	...	4.9	...	...
Franklin	132.0	35.4	90.7	0.7	4.4	...	0.8
Madison	199.6	...	170.5	...	21.9	...	7.2
Morehouse	287.5	148.3	120.4	0.5	17.9	...	0.3
Richland	68.0	1.8	59.5	...	6.8	...	...
Tensas	208.8	...	190.6	...	17.1	...	1.2
West Carroll	27.1	...	20.1	...	6.9	...	...
All parishes	1476.0	267.3	1078.8	3.3	107.9	1.8	16.9

Table 32 – Number of live trees on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)											
		1.0-2.9	3.0-4.9	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
-----Thousand trees-----													
Slash pine	279	...	...	...	51	...	111	100	18	...	...	...	...
Shortleaf pine	797	...	...	184	217	192	37	72	34	38	...	22	...
Loblolly pine	73145	32706	20308	9060	4117	2523	1766	906	793	477	271	218	...
Cypress	1849	690	...	102	301	75	235	164	124	23	33	68	34
Total softwoods	76070	33396	20308	9346	4685	2791	2148	1242	969	538	304	309	34
Select white oaks	4215	1260	1379	395	273	402	126	173	104	...	55	29	18
Select red oaks	5648	2300	1764	703	182	96	239	69	56	30	68	129	11
Other white oaks	15627	5017	3165	2727	1388	1099	718	369	261	302	149	352	81
Other red oaks	33628	15616	4749	2745	3014	1757	2046	1006	744	488	475	771	218
Sweet pecan	2297	1295	...	279	137	208	104	44	15	85	39	46	44
Water hickory	13971	7084	2983	585	1040	825	433	271	284	137	171	112	46
Other hickories	6175	4495	1167	278	...	43	70	74	...	27	12	8	...
Persimmon	5025	3242	690	808	68	196	...	21	...	...	...	...	...
Hard maple	1164	508	508	90	...	57	...	...	...	...	...	...	...
Soft maple	6458	5828	...	495	135	...	...	...	...	...	...	...	...
Boxelder	7703	5832	...	270	783	378	336	...	63	22	20	...	...
Beech	455	...	...	207	...	49	70	...	42	18	12	55	4
Sweetgum	46131	22652	9443	4124	2771	2697	1544	1041	695	515	286	335	27
Blackgum	4068	3680	...	199	83	...	35	21	...	16	24	10	...
Other gums/tupelos	642	...	...	168	...	95	78	150	72	45	9	23	...
White ash	2852	2329	...	104	197	...	69	49	78	15	...	10	...
Other ashes	19411	11024	2906	2110	1138	955	492	173	250	76	172	115	...
Sycamore	4147	1490	...	1441	456	417	135	90	52	22	17	25	2
Cottonwood	3199	...	1017	670	348	344	225	190	77	105	75	107	42
Yellow-poplar	177	...	...	154	...	...	...	...	23	...	...	...	...
Willow	12502	5990	1525	1937	1064	228	674	245	273	139	196	187	44
Black cherry	3521	3315	...	207	...	...	...	...	...	...	...	...	...
American elm	15992	7917	4925	777	1242	276	374	223	67	81	64	47	...
Other elms	49105	38750	6480	1256	738	742	305	316	153	168	76	113	9
Hackberry	30910	14030	5941	4042	3144	1484	940	495	420	215	90	110	...
Other locusts	2986	605	...	817	526	433	252	63	176	13	39	39	23
Sassafras	1359	1198	...	161	...	...	...	...	...	...	...	...	...
Dogwood	9131	7835	1184	112	...	...	...	...	...	...	...	...	...
Holly	537	537	...	...	...	...	...	...	...	...	...	...	...
Other commercial	580	495	...	85	...	...	...	...	...	...	...	...	...
Total hardwoods	309617	174323	49823	27948	18730	12780	9265	5082	3904	2516	2051	2622	571
Noncommercial	32178	27100	2424	1648	614	273	53	66	...	...	...	...	...
All species	417865	234818	72556	38942	24029	15844	11467	6391	4873	3054	2355	2931	605

Table 33—Number of growing-stock trees on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991

Species	Diameter class (inches at breast height)										
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>-----Thousand trees-----</i>											
Slash pine	279	...	51	...	111	100	18	...	...	...	...
Shortleaf pine	797	184	217	192	37	72	34	38	...	22	...
Loblolly pine	19510	8694	3974	2470	1706	906	793	477	271	218	...
Cypress	978	...	301	75	198	145	124	23	33	58	20
Total softwoods	21564	8878	4543	2738	2051	1224	969	538	304	299	20
Select white oaks	1430	395	220	402	126	102	90	...	55	21	18
Select red oaks	1455	575	182	96	239	69	56	30	68	129	11
Other white oaks	5837	1942	1141	897	571	349	246	264	100	289	40
Other red oaks	11897	2214	2878	1605	1732	941	744	448	437	723	175
Sweet pecan	823	177	137	208	80	...	15	85	31	46	44
Water hickory	3428	369	992	778	369	271	246	137	143	83	40
Other hickories	309	87	...	43	70	74	...	27	...	8	...
Persimmon	904	730	...	154	...	21	...	...	...	...	...
Hard maple	90	90	...	...	...	...	...	...	...	...	...
Soft maple	133	85	48	...	...	...	...	...	...	...	...
Boxelder	1235	270	460	208	230	...	46	11	10	...	...
Beech	389	207	...	49	38	...	21	18	12	44	...
Sweetgum	12345	3545	2457	2309	1335	920	678	488	277	318	18
Blackgum	169	...	83	...	35	21	...	16	14	...	...
Other gums/tupelos	642	168	...	95	78	150	72	45	9	23	...
White ash	416	104	140	...	69	49	39	15	...	...	...
Other ashes	3812	1226	864	732	388	127	200	64	127	83	...
Sycamore	2597	1441	456	375	135	90	34	22	17	25	2
Cottonwood	2118	670	348	344	199	154	77	105	75	107	39
Yellow-poplar	177	154	...	...	...	...	23	...	...	...	...
Willow	4407	1855	1064	228	569	117	199	57	146	146	26
Black cherry	207	207	...	...	...	...	...	...	...	...	...
American elm	2299	353	1040	276	220	184	35	81	64	47	...
Other elms	2863	597	657	631	275	295	118	143	44	98	4
Hackberry	7630	2518	2763	1106	488	288	234	128	40	65	...
Other locusts	1546	652	162	397	112	63	89	13	29	19	10
Sassafras	161	161	...	...	...	...	...	...	...	...	...
Dogwood	112	112	...	...	...	...	...	...	...	...	...
Other commercial	85	85	...	...	...	...	...	...	...	...	...
Total hardwoods	69518	20989	16092	10935	7356	4287	3263	2196	1701	2273	428
All species	91082	29867	20635	13673	9407	5511	4231	2734	2004	2571	448

Table 34—Volume of growing stock on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)									
		5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
-----Million cubic feet-----											
Slash pine	7.0	...	0.6	...	2.5	3.2	0.7	...	...	...	...
Shortleaf pine	15.2	0.3	1.5	2.6	0.9	3.1	1.6	2.4	...	2.6	...
Loblolly pine	223.7	18.2	22.8	27.5	31.3	25.7	32.9	26.9	18.5	20.1	...
Cypress	21.4	...	1.2	1.4	2.5	2.3	4.0	1.3	1.9	4.2	2.6
Total softwoods	267.3	18.5	26.2	31.5	37.2	34.3	39.1	30.6	20.4	26.9	2.6
Select white oaks	22.1	0.8	1.3	4.5	2.2	3.1	3.4	...	2.9	1.3	2.6
Select red oaks	27.5	1.3	1.0	1.4	4.0	1.8	2.2	1.1	3.9	9.4	1.6
Other white oaks	80.1	5.8	6.0	8.1	9.1	7.4	6.9	9.0	4.5	18.4	4.8
Other red oaks	246.2	6.0	17.9	15.1	32.4	24.3	25.6	18.7	24.6	53.4	28.1
Sweet pecan	25.7	0.3	0.7	2.6	1.4	...	0.4	4.0	2.2	5.9	8.1
Water hickory	64.0	0.8	6.1	6.6	5.6	6.5	8.2	5.5	8.8	6.5	9.5
Other hickories	5.9	0.2	...	0.4	1.6	1.8	...	1.1	...	0.7	...
Persimmon	2.7	1.3	...	1.0	...	0.4	...	...	...	...	...
Hard maple	0.4	0.4	...	...	...	...	...	...	...	...	...
Soft maple	0.8	0.3	0.4	...	...	...	...	...	...	...	...
Boxelder	13.3	1.0	2.9	2.9	4.0	...	1.5	0.7	0.4	...	...
Beech	6.9	0.4	...	0.4	0.7	...	0.6	0.8	0.7	3.3	...
Sweetgum	207.0	8.2	14.7	26.7	26.2	28.9	28.8	25.6	18.0	27.8	2.1
Blackgum	2.8	...	0.5	...	0.6	0.4	...	0.7	0.5	...	...
Other gums/tupelos	18.0	0.9	...	1.4	2.3	4.8	3.7	3.1	0.5	1.3	...
White ash	5.8	0.5	1.2	...	1.1	1.2	1.2	0.6	...	...	...
Other ashes	46.1	3.3	5.7	7.8	6.1	2.8	7.0	2.5	6.1	4.8	...
Sycamore	25.0	4.1	3.3	5.4	3.0	2.5	1.2	1.4	1.1	2.2	0.8
Cottonwood	52.4	1.8	1.2	4.9	4.7	5.6	3.5	6.5	5.5	12.2	6.5
Yellow-poplar	0.9	0.4	...	...	...	...	0.5	...	...	...	...
Willow	68.2	6.8	6.3	2.2	8.3	4.4	8.7	2.7	10.1	13.6	5.1
Black cherry	0.5	0.5	...	...	...	...	...	...	...	...	...
American elm	25.2	0.9	5.0	2.5	3.2	3.4	1.0	3.4	3.1	2.7	...
Other elms	47.4	1.3	4.5	6.7	4.6	7.2	3.9	6.8	2.0	9.6	0.9
Hackberry	65.2	6.6	15.0	12.1	7.5	7.1	6.1	4.8	1.7	4.2	...
Other locusts	18.0	2.0	1.0	3.3	2.0	1.4	3.6	0.6	2.0	1.3	0.8
Sassafras	0.2	0.2	...	...	...	...	...	...	...	...	...
Dogwood	0.3	0.3	...	...	...	...	...	...	...	...	...
Other commercial	0.3	0.3	...	...	...	...	...	...	...	...	...
Total hardwoods	1078.8	56.5	94.8	116.1	130.5	115.2	118.0	99.6	98.7	178.5	70.9
All species	1346.1	75.0	121.0	147.6	167.7	149.5	157.1	130.2	119.1	205.4	73.6

Table 35 – *Volume of growing stock in the sawlog portion of sawtimber trees on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991*

Species	All classes	Diameter class (inches at breast height)							
		9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0- 28.9	29.0 & larger
----- <i>Million cubic feet</i> -----									
Slash pine	5.8	...	2.3	2.9	0.6	...	...	...	...
Shortleaf pine	12.2	2.2	0.9	2.8	1.4	2.4	...	2.6	...
Loblolly pine	164.3	21.9	27.3	22.8	30.4	25.2	17.5	19.2	...
Cypress	18.2	1.2	2.0	2.1	3.7	1.2	1.7	4.0	2.1
Total softwoods	200.5	25.2	32.5	30.6	36.2	28.8	19.2	25.8	2.1
Select white oaks	12.6	...	1.5	2.5	2.8	...	2.4	1.1	2.3
Select red oaks	20.9	...	3.3	1.6	2.0	0.9	3.5	8.4	1.4
Other white oaks	50.3	...	6.8	6.1	5.5	8.0	4.0	16.0	4.0
Other red oaks	175.2	...	24.3	19.9	22.2	16.4	21.7	45.8	25.0
Sweet pecan	19.8	...	1.0	...	0.3	3.5	2.1	5.4	7.4
Water hickory	41.1	...	4.3	5.3	6.7	4.2	7.1	5.3	8.2
Other hickories	4.1	...	1.3	1.5	...	0.9	...	0.4	...
Persimmon	0.3	...	...	0.3	...	...	...	...	...
Boxelder	5.1	...	2.9	...	1.3	0.6	0.3	...	...
Beech	5.1	...	0.5	...	0.5	0.7	0.5	2.9	...
Sweetgum	132.5	...	19.0	24.4	24.7	22.5	15.6	24.3	1.9
Blackgum	2.0	...	0.5	0.4	...	0.6	0.5	...	...
Other gums/tupelos	14.1	...	2.1	4.1	3.4	2.9	0.5	1.1	...
White ash	3.1	...	0.6	0.9	1.1	0.5	...	...	...
Other ashes	24.3	...	3.9	2.3	6.1	2.4	5.2	4.3	...
Sycamore	10.2	...	2.1	2.1	1.1	1.3	1.0	1.9	0.7
Cottonwood	39.5	...	3.3	4.8	3.0	6.0	5.0	11.4	6.1
Yellow-poplar	0.4	...	...	...	0.4	...	...	...	...
Willow	44.9	...	5.3	3.8	7.2	2.3	8.9	12.4	4.9
American elm	13.5	...	2.1	2.8	0.7	2.7	2.8	2.3	...
Other elms	30.0	...	3.7	6.3	3.6	5.9	1.5	8.3	0.8
Hackberry	25.5	...	5.5	5.7	5.1	4.3	1.4	3.6	...
Other locusts	9.7	...	1.5	1.1	3.2	0.5	1.9	0.8	0.7
Total hardwoods	684.2	...	95.5	95.9	101.0	87.1	85.8	155.7	63.3
All species	884.7	25.2	128.0	126.5	137.1	115.9	105.0	181.5	65.4

Table 36—*Volume of timber on timberland by detailed species and class of timber, North Delta Louisiana Parishes, 1991*

Species	All live	Growing stock	Rough	Rotten
----- Million cubic feet -----				
Slash pine	7.0	7.0	...	...
Shortleaf pine	15.2	15.2	...	...
Loblolly pine	226.0	223.7	2.3	...
Cypress	24.2	21.4	0.9	1.8
Total softwoods	272.3	267.3	3.3	1.8
Select white oaks	24.3	22.1	2.2	...
Select red oaks	27.7	27.5	0.2	...
Other white oaks	92.8	80.1	10.0	2.7
Other red oaks	260.7	246.2	12.4	2.1
Sweet pecan	27.1	25.7	1.4	...
Water hickory	68.8	64.0	4.4	0.4
Other hickories	6.6	5.9	0.7	...
Persimmon	3.2	2.7	0.5	...
Hard maple	0.5	0.4	0.2	...
Soft maple	1.6	0.8	0.9	...
Boxelder	17.7	13.3	3.3	1.1
Beech	8.5	6.9	1.1	0.4
Sweetgum	218.4	207.0	10.0	1.4
Blackgum	4.0	2.8	1.3	...
Other gums/tupelos	18.0	18.0	...	...
White ash	7.6	5.8	1.5	0.3
Other ashes	55.8	46.1	8.4	1.4
Sycamore	25.6	25.0	0.6	...
Cottonwood	53.9	52.4	1.0	0.5
Yellow-poplar	0.9	0.9	...	...
Willow	77.9	68.2	9.0	0.6
Black cherry	0.5	0.5	...	...
American elm	30.0	25.2	4.6	0.2
Other elms	54.9	47.4	6.1	1.3
Hackberry	85.1	65.2	16.2	3.7
Other locusts	23.6	18.0	4.7	0.8
Sassafras	0.2	0.2	...	...
Dogwood	0.3	0.3	...	...
Other commercial	0.3	0.3	...	...
Total hardwoods	1196.4	1078.8	100.7	16.9
Noncommercial	7.2	...	7.2	...
All species	1476.0	1346.1	111.2	18.7

Table 37—Volume of sawtimber for tree grade 1 on timberland by detailed species and diameter class, North Delta, Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
-----Million board feet-----									
Shortleaf pine	9.7	...	...	...	5.7	4.1	...	...	...
Loblolly pine	228.2	7.9	9.7	15.4	33.2	49.8	42.0	70.2	...
Cypress	11.9	...	...	...	4.7	...	...	...	7.2
Total softwoods	249.9	7.9	9.7	15.4	43.6	53.9	42.0	70.2	7.2
Select white oaks	18.3	...	...	...	...	...	7.7	3.0	7.5
Select red oaks	37.6	...	...	...	3.5	...	14.1	13.5	6.5
Other white oaks	33.0	...	...	...	...	5.8	9.3	11.8	6.0
Other red oaks	229.6	...	...	...	8.9	19.8	55.4	103.8	41.6
Sweet pecan	53.6	...	...	...	...	7.6	...	12.7	33.3
Water hickory	40.1	...	...	...	1.8	2.6	9.7	9.4	16.6
Boxelder	4.1	...	...	...	...	4.1	...	...	...
Sweetgum	182.1	...	...	...	21.8	50.7	38.9	62.7	8.0
Blackgum	3.5	...	...	...	...	3.5	...	...	...
Other gums/tupelos	1.5	...	...	...	...	...	...	1.5	...
White ash	2.9	...	...	...	...	2.9	...	...	...
Other ashes	47.8	...	...	...	11.8	7.8	14.2	14.0	...
Sycamore	19.7	...	...	...	4.0	8.1	3.4	...	4.3
Cottonwood	94.8	...	...	...	3.2	15.1	18.2	35.3	23.1
Willow	20.8	...	...	...	...	...	8.3	12.5	...
American elm	16.6	...	...	...	...	3.0	13.6	...	...
Other elms	8.0	...	...	...	...	8.0	...	...	...
Hackberry	2.3	...	...	...	...	2.3	...	...	...
Other locusts	9.6	...	...	...	6.4	3.2	...	...	...
Total hardwoods	825.7	...	...	...	61.3	144.5	192.8	280.2	146.9
All species	1075.5	7.9	9.7	15.4	105.0	198.3	234.8	350.3	154.0

Table 38—Volume of sawtimber for tree grade 2 on timberland by detailed species and diameter class, North Delta, Louisiana Parishes, 1991

Louisiana Parishes, 1971									
Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
-----Million board feet-----									
Shortleaf pine	28.5	4.1	5.7	8.9	4.2	5.6	...	...	...
Loblolly pine	88.9	1.8	6.1	8.2	10.9	17.5	19.1	25.1	...
Cypress	4.0	...	...	...	...	...	...	4.0	...
Total softwoods	121.4	5.9	11.8	17.1	15.2	23.1	19.1	29.1	...
Select white oaks	9.1	...	...	4.1	...	...	5.0	...	...
Select red oaks	31.6	...	...	4.6	3.9	2.6	7.0	13.4	...
Other white oaks	37.6	...	...	9.6	6.9	8.5	4.1	8.3	...
Other red oaks	179.5	...	...	26.7	26.7	19.4	9.2	60.4	37.1
Sweet pecan	16.6	...	...	...	...	...	...	3.4	13.3
Water hickory	64.2	...	...	2.1	14.1	14.7	10.8	2.8	19.6
Other hickories	3.9	...	...	3.9	...	...	...	...	...
Sweetgum	200.4	...	...	52.2	52.9	19.5	35.8	40.0	...
Blackgum	5.1	...	...	2.1	...	...	3.0	...	...
Other gums/tupelos	3.7	...	...	...	3.7	...	...	...	...
White ash	9.4	...	...	3.6	5.8	...	...	...	...
Other ashes	24.8	...	...	...	17.4	4.3	3.1	...	...
Sycamore	6.0	...	...	3.1	2.9	...	...	...	...
Cottonwood	13.2	...	...	...	...	7.7	...	1.8	3.7
Willow	77.6	...	...	12.5	25.2	2.1	17.0	20.7	...
American elm	12.8	...	...	5.1	3.9	2.5	...	1.4	...
Other elms	30.6	...	...	3.0	9.7	4.1	...	13.8	...
Hackberry	10.0	...	...	4.0	3.9	2.2	...	...	...
Other locusts	14.5	...	...	4.9	6.8	...	...	2.8	...
Total hardwoods	750.7	...	...	141.4	184.1	87.6	95.1	168.8	73.6
All species	872.0	5.9	11.8	158.6	199.2	110.7	114.2	197.9	73.6

Table 39—Volume of sawtimber for tree grade 3 on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>-----Million board feet-----</i>									
Slash pine	35.1	...	13.3	18.1	3.8	...	...	...	...
Shortleaf pine	44.4	8.5	...	10.8	...	7.0	...	18.1	...
Loblolly pine	675.9	102.8	139.6	114.5	142.2	95.8	47.7	33.3	...
Cypress	77.4	6.9	9.2	10.1	15.1	7.2	9.8	17.3	1.9
Total softwoods	832.9	118.2	162.1	153.5	161.0	110.0	57.5	68.7	1.9
Select white oaks	19.5	...	7.7	...	4.4	...	...	...	7.5
Select red oaks	46.6	...	14.0	4.5	...	3.3	...	23.3	1.6
Other white oaks	166.9	...	35.3	16.0	16.6	21.6	11.3	46.5	19.7
Other red oaks	360.0	...	89.8	45.1	62.4	24.6	26.5	63.3	48.4
Sweet pecan	22.0	...	6.3	...	1.0	...	4.5	10.1	...
Water hickory	99.8	...	21.0	16.2	13.7	5.1	18.1	10.6	14.9
Other hickories	13.5	...	7.8	2.6	...	...	...	3.1	...
Persimmon	1.5	...	...	1.5	...	...	...	...	...
Boxelder	23.5	...	15.3	...	8.2	...	...	...	...
Beech	10.5	...	2.8	...	...	...	3.2	4.5	...
Sweetgum	285.8	...	93.3	67.2	53.5	42.6	10.4	18.8	...
Blackgum	3.1	...	3.1	...	...	...	...	...	...
Other gums/tupelos	86.1	...	14.5	26.1	19.0	21.0	2.7	2.9	...
White ash	4.2	...	2.5	1.7	...	...	...	...	...
Other ashes	49.5	...	18.9	9.6	4.6	...	9.9	6.5	...
Sycamore	30.5	...	11.4	8.6	...	...	...	10.5	...
Cottonwood	89.9	...	18.7	26.1	12.5	10.3	9.5	12.8	...
Willow	92.6	...	20.7	5.1	8.9	7.4	23.1	27.3	...
American elm	25.7	...	7.2	3.1	...	8.4	3.4	3.5	...
Other elms	72.2	...	14.9	16.4	11.9	10.5	3.8	14.7	...
Hackberry	84.6	...	18.8	20.3	11.2	15.4	1.9	17.1	...
Other locusts	8.3	...	6.0	...	...	...	...	2.3	...
Total hardwoods	1596.5	...	430.0	270.1	227.9	170.1	128.4	278.0	92.0
All species	2429.3	118.2	592.1	423.6	389.0	280.1	185.9	346.6	93.9

Table 40—Volume of sawtimber for tree grade 4 on timberland by detailed species and diameter class, North Delta Louisiana Parishes, 1991

Species	All classes	Diameter class (inches at breast height)							
		9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 & larger
<i>-----Million board feet-----</i>									
Select white oaks	24.6	...	...	7.0	11.5	...	3.6	2.4	...
Select red oaks	6.9	...	4.2	...	...	...	...	2.7	...
Other white oaks	55.0	...	...	8.6	7.4	8.6	...	28.3	2.1
Other red oaks	225.4	...	37.6	40.8	23.7	31.2	37.2	35.5	19.4
Sweet pecan	33.9	...	...	...	...	14.0	8.7	11.2	...
Water hickory	43.2	...	2.6	10.4	12.0	...	8.0	10.2	...
Other hickories	8.8	...	...	2.3	...	6.4	...	...	...
Boxelder	1.5	...	...	...	...	...	1.5	...	...
Beech	15.9	...	...	...	2.9	4.6	...	8.3	...
Sweetgum	28.5	...	4.4	12.3	...	7.2	...	4.6	...
Other ashes	5.1	...	...	3.2	1.9	...	...	...	...
Cottonwood	17.4	...	...	...	3.7	4.2	4.3	5.3	...
Yellow-poplar	2.6	...	...	...	2.6	...	...	...	...
Willow	32.2	...	5.2	4.4	9.9	3.1	4.0	5.5	...
American elm	22.2	...	4.0	7.8	...	3.1	...	7.3	...
Other elms	58.6	...	6.5	13.8	...	11.7	4.8	17.2	4.6
Hackberry	33.4	...	8.1	8.1	8.6	1.6	4.2	2.8	...
Other locusts	17.0	...	...	1.1	3.4	...	12.5	...	...
Total hardwoods	632.2	...	72.6	119.9	87.5	95.7	88.7	141.5	26.2
All species	632.2	...	72.6	119.9	87.5	95.7	88.7	141.5	26.2

Table 41—Volume of sawtimber on timberland by species and ownership class, North Delta Louisiana Parishes, 1991

Species	All ownerships	National forest	Other public	Forest industry	Forest industry- leased	Other private
-----Million board feet-----						
Yellow pines	1116.8	...	79.1	727.5	...	310.2
Cypress	97.7	...	5.1	...	...	92.6
Total softwoods	1214.5	...	84.1	727.5	...	402.9
Select white-red oaks	201.5	...	29.8	50.0	...	121.7
Other white-red oaks	1354.0	...	206.3	215.8	...	931.8
Hickory	408.7	...	110.9	63.5	...	234.3
Sweetgum	774.7	...	76.9	132.8	56.8	508.1
Tupelo and blackgum	105.2	...	3.5	5.1	...	96.6
Ash-walnut-black cherry	147.4	...	47.4	47.9	...	52.1
Yellow-poplar	2.6	...	...	...	...	2.6
Other hardwoods	1080.1	...	296.4	157.2	...	626.5
Total hardwoods	4074.2	...	771.3	672.4	56.8	2573.7
All species	5288.6	...	855.4	1399.8	56.8	2976.6

Table 42—Average net annual growth, average annual removals, and average annual mortality of live trees¹ by parish and species group, North Delta Louisiana Parishes, 1991

Parish	Net growth			Removals			Mortality		
	All species	Softwood	Hardwood	All species	Softwood	Hardwood	All species	Softwood	Hardwood
-----Million cubic feet-----									
Catahoula	8.8	3.8	5.0	3.9	3.7	0.2	2.0	0.9	1.2
Concordia	6.6	...	6.6	7.9	...	7.9	3.7	...	3.7
East Carroll	1.5	0.2	1.3	4.3	...	4.3	1.0	...	1.0
Franklin	4.1	1.2	2.8	1.4	...	1.4	2.3	1.2	1.1
Madison	11.5	...	11.5	5.5	...	5.5	2.0	...	2.0
Morehouse	15.1	8.4	6.7	15.0	7.1	7.9	1.6	0.3	1.3
Richland	5.8	...	5.8	1.1	...	1.1	0.7	...	0.7
Tensas	8.6	...	8.6	14.0	...	14.0	1.7	...	1.7
West Carroll	2.3	...	2.3	...	...	...	...	...	...
All parishes	64.2	13.7	50.5	53.2	10.8	42.3	15.1	2.4	12.7

¹Excludes trees less than 5.0 inches in diameter at breast height.

Table 43—Average net annual growth, average annual removals, and average annual mortality of live trees¹ by ownership class and species group, North Delta Louisiana Parishes, 1991

Ownership class	Net growth			Removals			Mortality		
	All classes	Softwood	Hardwood	All species	Softwood	Hardwood	All species	Softwood	Hardwood
-----Million cubic feet-----									
Other public	6.9	0.6	6.3	4.8	...	4.8	4.1	...	4.1
Forest industry	22.2	11.9	10.3	15.7	9.3	6.5	3.8	1.3	2.5
Forest industry-leased	0.2	...	0.2	0.4	...	0.4	0.2	...	0.2
Other private	34.8	1.1	33.7	32.2	1.6	30.7	7.0	1.1	5.9
All ownerships	64.2	13.7	50.5	53.2	10.8	42.3	15.1	2.4	12.7

¹Excludes trees less than 5.0 inches in diameter at breast height.

Figures 1-9

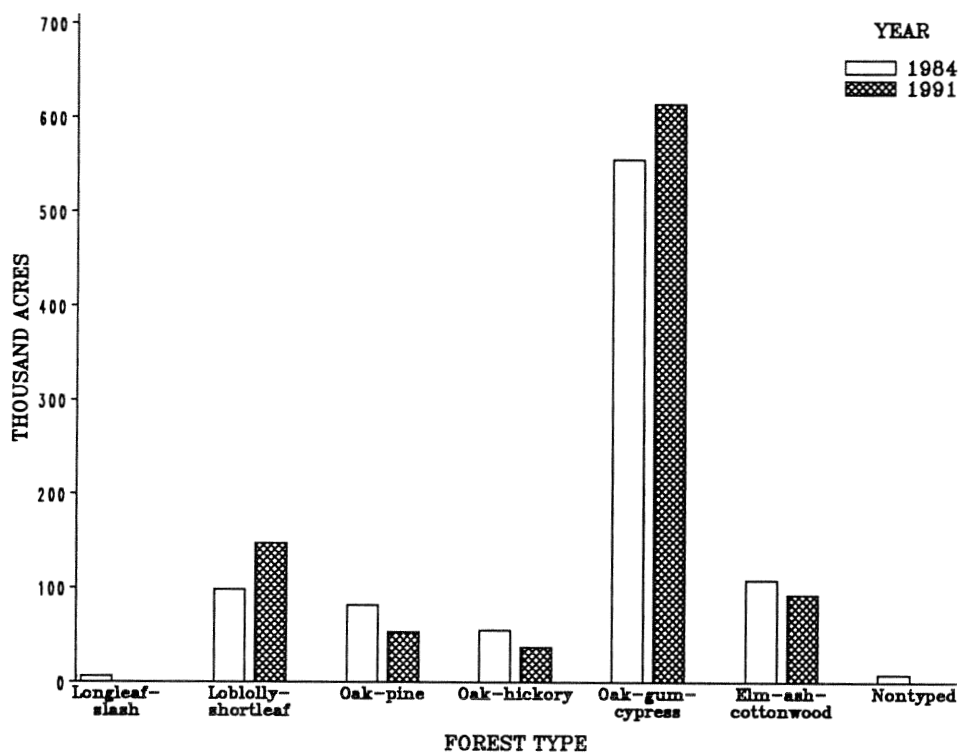


Figure 1. —Area of timberland by forest type, North Delta Louisiana Parishes, 1984 and 1991.

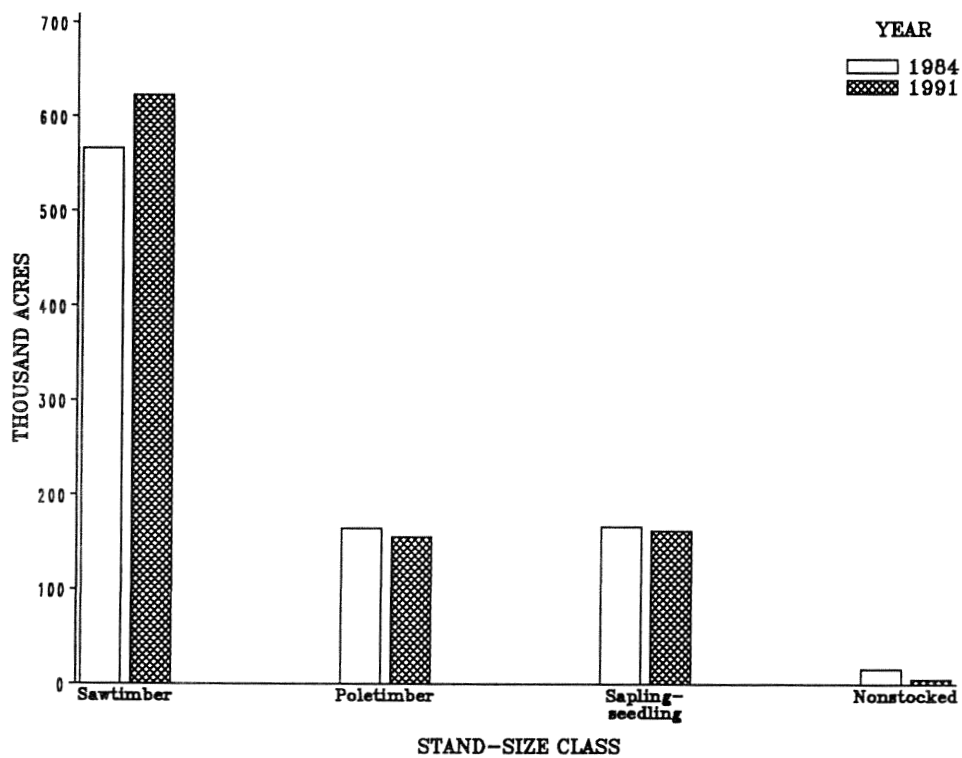


Figure 2. —Area of timberland by stand-size class, North Delta Louisiana Parishes, 1984 and 1991.

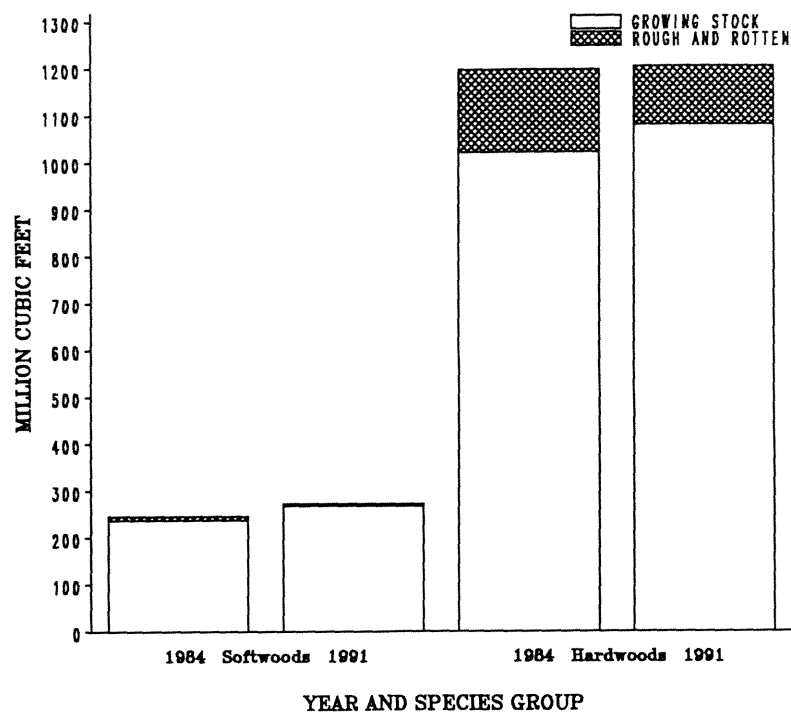


Figure 3.—Volume of live trees on timberland by species group and class of timber, North Delta Louisiana Parishes, 1984 and 1991.

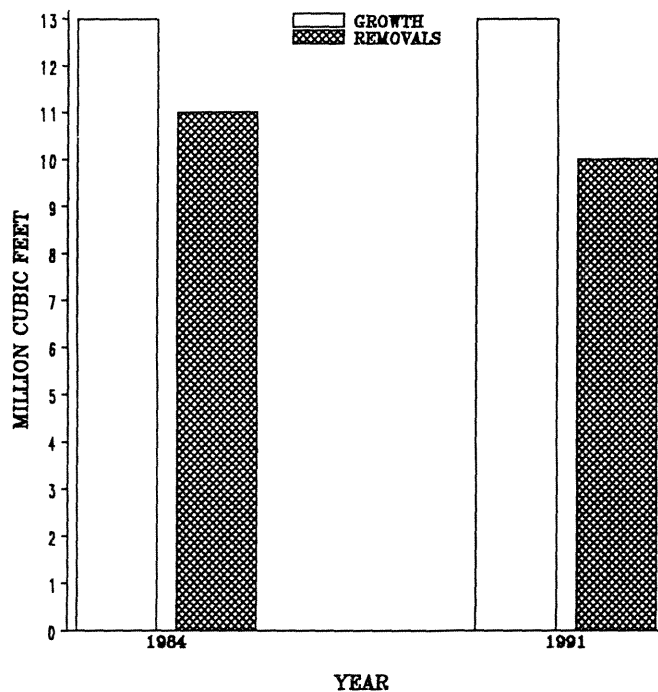


Figure 4.—Average net annual growth and average annual removals of live softwood trees on timberland, North Delta Louisiana Parishes, 1984 and 1991.

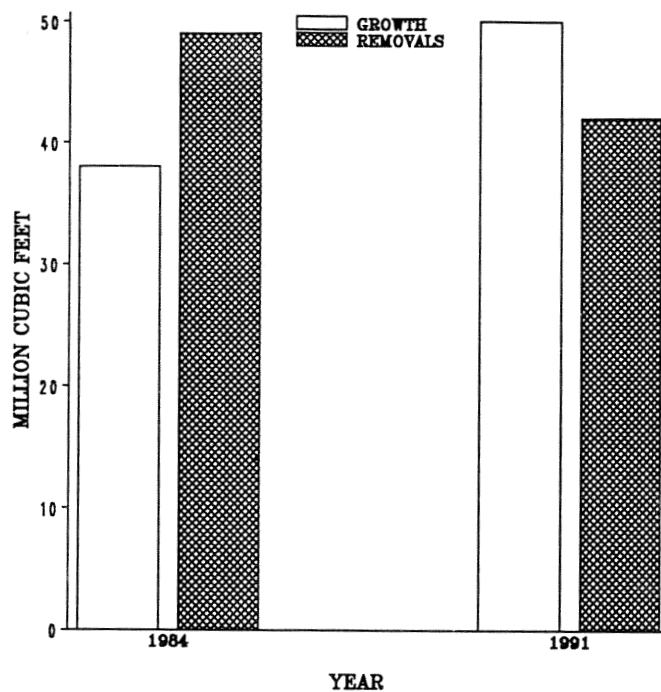


Figure 5.—Average net annual growth and average annual removals of live hardwood trees on timberland, North Delta Louisiana Parishes, 1984 and 1991.

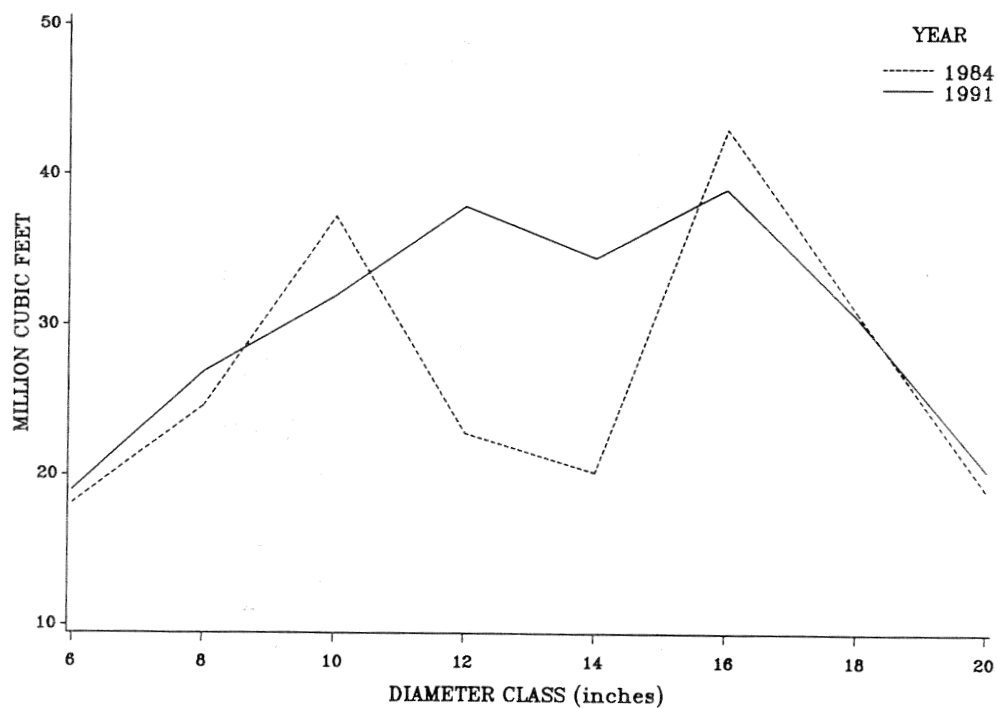


Figure 6.—Volume of live softwood trees on timberland by diameter class, North Delta Louisiana Parishes, 1984 and 1991.

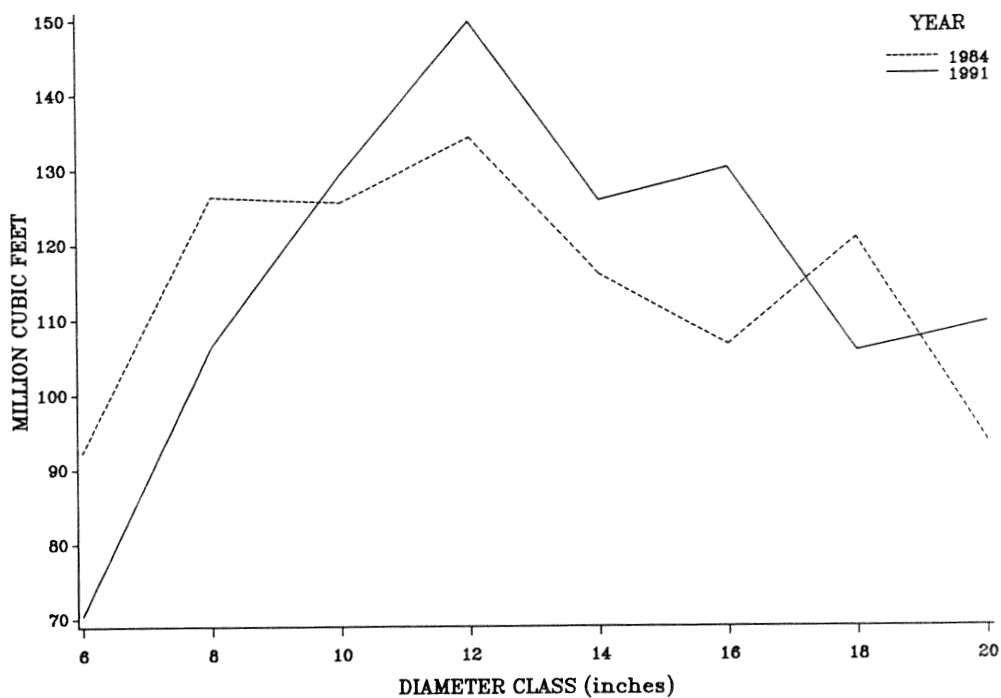


Figure 7.—*Volume of live hardwood trees on timberland by diameter class, North Delta Louisiana Parishes, 1984 and 1991.*

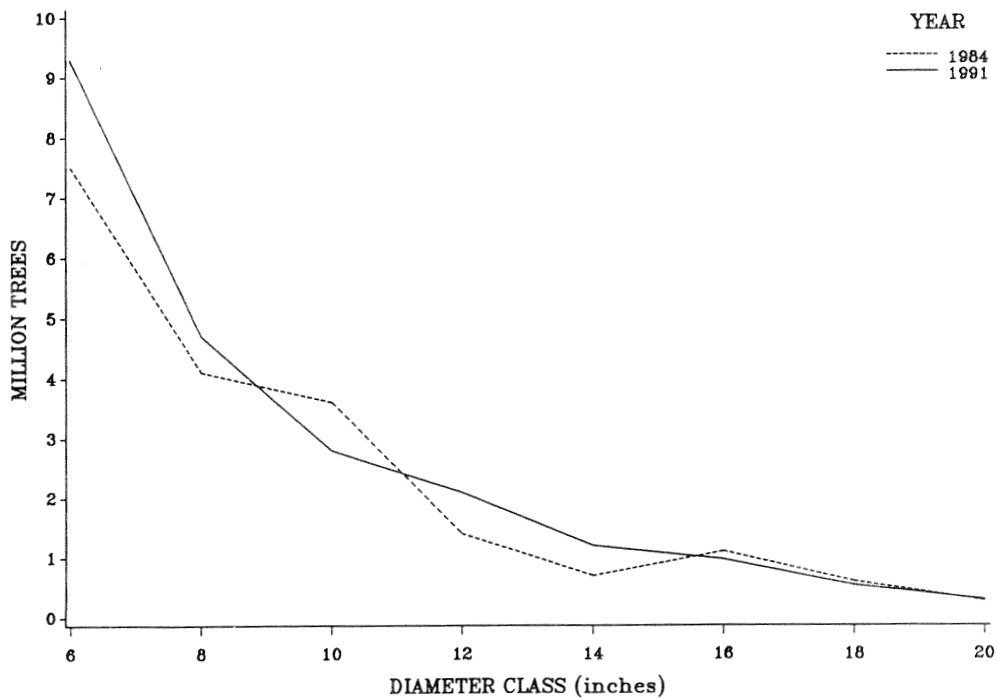


Figure 8.—*Number of live softwood trees on timberland by diameter class, North Delta Louisiana Parishes, 1984 and 1991.*

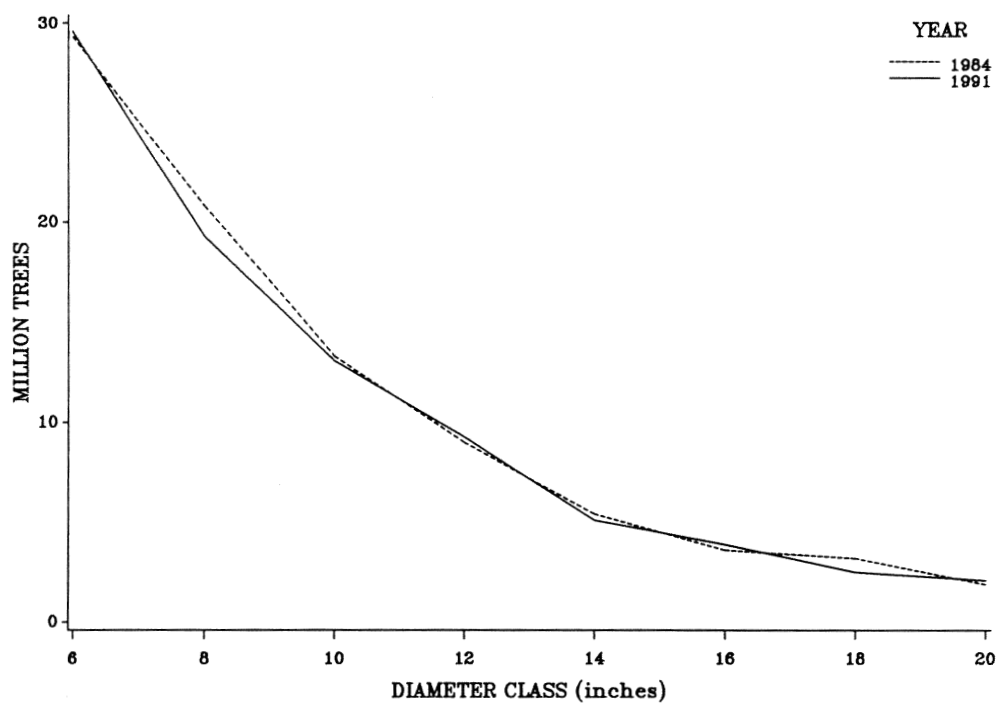


Figure 9. — *Number of live hardwood trees on timberland by diameter class, North Delta Louisiana Parishes, 1984 and 1991.*